

Prüfbericht-Nr.: Test report no.:	CN22PBBM 001	Auftrags-Nr.: Order No.:	170305990	Seite 1 von 12 Page 1 of 12																								
Kunden-Referenz-Nr.: Client reference no.:	1288983	Auftragsdatum: Order date.:	2022.04.20																									
Auftraggeber: Client:	IKEA of Sweden AB Box 702, SE-343 81 Älmhult, Sweden																											
Prüfgegenstand: Test item:	Self-ballasted LED lamp																											
Bezeichnung / Typ-Nr.: Identification / Type No.:	LED2102G3																											
Auftrags-Inhalt: Order content:	TUV Rheinland - EMC service																											
Prüfgrundlage: Test specification:	Conducted Emission limits describes at FCC 47 CFR Part 15 (October 1, 2020) Subpart B section 15.107 (a) Radiated Emission limits describes at FCC 47 CFR Part 15 (October 1, 2020) Subpart B section 15.109 (a) ICES-005 Issue 5 December 2018																											
Wareneingangsdatum: Date of sample receipt:	2022.05.23	<i>confidential sample</i>																										
Prüfmuster-Nr.: Test sample No.:	A003254541																											
Prüfzeitraum: Testing period:	Refer to the 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:	<i>Webb Luo</i>		genehmigt von: authorized by:	<i>Cherry He</i>																								
Datum: Date: 2022.07.29			Ausstelldatum: Issue Date: 2022.07.29																									
Stellung/Position: Webb Luo/PE		Stellung/Position: Cherry He/Reviewer																										
Sonstiges / Other: The RF characteristics of this product are not evaluated in this report. FCC ID: FHO-LED2102G3																												
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged																										
<table border="0"> <tr> <td>* Legende:</td> <td>1 = sehr gut</td> <td>2 = gut</td> <td>3 = befriedigend</td> <td>4 = ausreichend</td> <td>5 = mangelhaft</td> </tr> <tr> <td></td> <td>P(ass) = entspricht o.g. Prüfgrundlage(n)</td> <td>F(ail) = entspricht nicht o.g. Prüfgrundlage(n)</td> <td></td> <td>N/A = nicht anwendbar</td> <td>N/T = nicht getestet</td> </tr> <tr> <td>Legend:</td> <td>1 = very good</td> <td>2 = good</td> <td>3 = satisfactory</td> <td>4 = sufficient</td> <td>5 = poor</td> </tr> <tr> <td></td> <td>P(ass) = passed a.m. test specifications(s)</td> <td>F(ail) = failed a.m. test specifications(s)</td> <td></td> <td>N/A = not applicable</td> <td>N/T = not tested</td> </tr> </table>					* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft		P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)		N/A = nicht anwendbar	N/T = nicht getestet	Legend:	1 = very good	2 = good	3 = satisfactory	4 = sufficient	5 = poor		P(ass) = passed a.m. test specifications(s)	F(ail) = failed a.m. test specifications(s)		N/A = not applicable	N/T = not tested
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Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>																												

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Test Report No.:

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TEST SUMMARY

5.1 CONDUCTED EMISSION

RESULT: Pass

5.2 RADIATED EMISSION

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 Instruments

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory

No. 110, 1/F., Building B, No.102, 1F of Southwest and No.205, 2F of West Warehouse Building, No.767 Tianyuan Road, Tianhe District, Guangzhou 510650, Guangdong, P.R. China

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Refer to Appendix 2.

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

Uncertainty of conducted emissions measurements 1.98 dB.

Uncertainty of radiated emissions measurements 5.34 dB (30-1000 MHz).

Uncertainty of radiated emissions measurements 4.56 dB (1000-18000 MHz).

The reported expanded uncertainty is based on a standard uncertainty multiply by a coverage factor $k=2$, providing a level of confidence of approximately 95%.

2.6 Sample Calculations

Calculation of test results for conducted emission measurement:

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter
1.257000	41.59	---	56.00	14.41	1000.0	9.000	N	OFF
1.270500	42.28	---	56.00	13.72	1000.0	9.000	N	OFF

Frequency (MHz) = Emission frequency in MHz

Level (dBuV) = Reading converted to dBuV and correction Factor added (QuasiPeak or CAverage)

Reading (dBuV) = Level (dBuV) – Corr. (dB) (Uncorrected Analyzer/Receiver reading)

Corr (dB) = LISN Factor (including extended outlet insertion loss if > 0.5dB) + Cable loss

Limit (dBuV) = Limit stated in standard

Margin (dB) = Limit (dBuV) – Level (dBuV)

Detector: QP= Quasi-Peak; AVG= Average; PK= Peak

e.g.: 14.41dB (Margin) = 56.00dBuV (Limit) – 41.59dBuV (Level)

Calculation of test results for radiated emission measurement:

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)	Comment
38.600000	23.7	1000.0	120.000	V	19.9	16.3	40.0	
46.000000	24.4	1000.0	120.000	V	20.6	15.6	40.0	

Frequency (MHz) = Emission frequency in MHz

Level (dBuV/m) = Reading converted to dBuV and correction Factor added (QuasiPeak)

Reading (dBuV/m) = Level (dBuV/m) – Corr. (dB) (Uncorrected Analyzer/Receiver reading)

Corr (dB) = Antenna factor + Cable loss

Limit (dBuV/m) = Limit stated in standard

Margin (dB) = Limit (dBuV/m) – Level (dBuV/m)

Detector: QP= Quasi-Peak; AVG= Average; PK= Peak

e.g.: 23.7.0dBuV/m(Level)= 3.8dBuV/m(Reading) + 19.9dB(Factor)

16.3dB(Margin)= 40dBuV/m(Limit) - 23.7dBuV/m(Level)

2.7 Location of original data

The original copies of all test data taken during actual testing were attached at Appendix 1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Guangdong) file for certification follow-up purposes.

2.8 Status of facility used for testing

TÜV Rheinland (Guangdong) Ltd. is listed on the US Federal Communications Commission list of facilities approved to perform measurements, whose designation number is CN1207.

3 General Product Information

The submitted model **LED2102G3** is a self-ballasted LED lamp for lighting, belong to Class B equipment.

According to the above information, EMI tests were performed on model **LED2102G3**.

3.1 Product Function and Intended Use

Refer to Technical Documentation and User Manual.

3.2 Ratings and System Details

Type designation:	LED2102G3
Rated input:	AC 120V, 60Hz
Power	2.8W
Ports:	AC mains

Refer to the Technical Documentation for further information.

3.3 Independent Operation Modes

The basic operation modes are:

A: Lighting + Max.power

B: Lighting + Mid.power

C: Lighting + Min.power

Refer to User Manual for further details.

4 Test Set-up and Operation Mode

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.

4.2 Test Operation and Test Software

Refer to Test set-up in chapter 5.

4.3 Special Accessories and Auxiliary Equipment

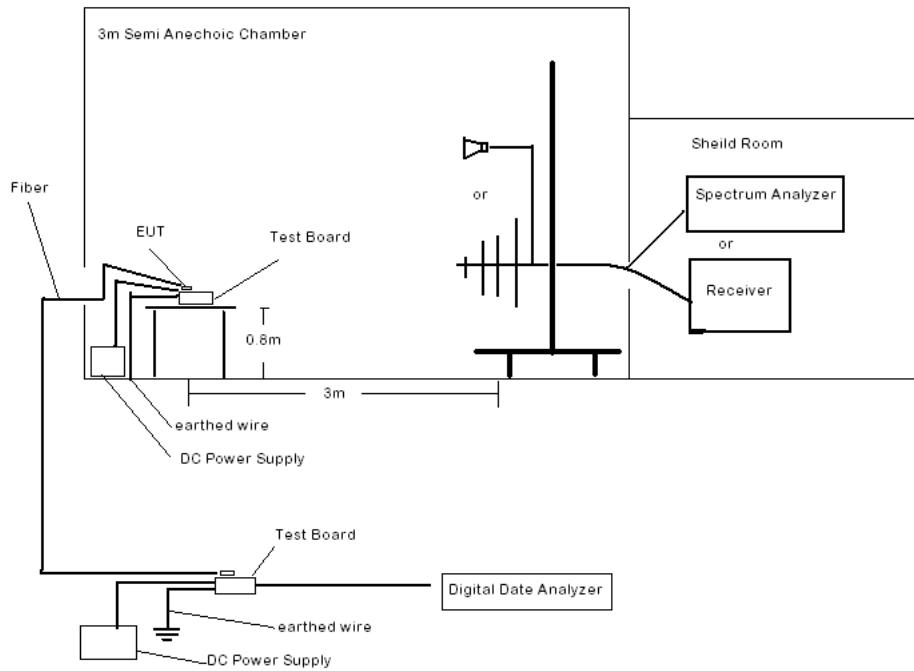
None.

4.4 Countermeasures to achieve EMC Compliance

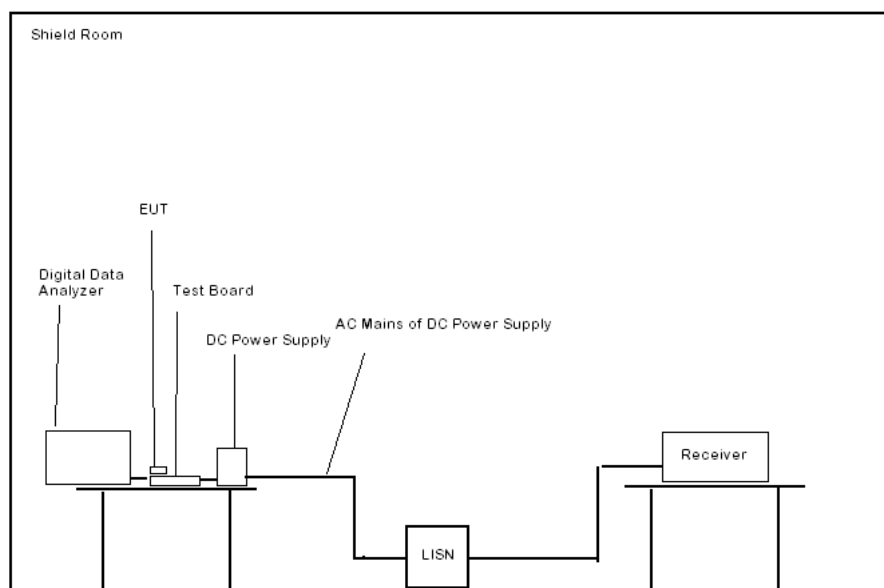
No additional countermeasures to the submitted test sample(s) were employed to achieve compliance.

4.5 Test set-up

Radiated Emission Setup



Conducted Emission Setup



5 Test Results of Emissions

5.1 Conducted Emission

RESULT:**Pass**

Date of testing : Refer to appendix 1
Test procedure : ANSI C63.4:2014
ANSI C63.4:2014 amended as per ANSI C63.4a-2017,
Clause 7.2
Equipment class : B
Limits : FCC 47 CFR Part 15 Subpart B Section 15.107 (a), limit for
Class B equipment.
ICES-005 Issue 5 2018, Limits for Alternative 1, Table 2

Test Setup

Input voltage : Refer to appendix 1
Operation mode : A(Worst mode)
Temperature : Refer to appendix 1
Humidity : Refer to appendix 1
Air pressure : Refer to appendix 1

Test procedure:

For tabletop device, the EUT and its peripherals were placed on a wooden table, 0.8cm above the horizontal reference plane and 40cm away from vertical reference plane in a shielded room. For floor-standing device, the EUT shall be placed either directly on the reference ground plane or on insulating material as described in ANSI C63.4 Clause 6.3.2.1. The EUT was connected to input power source through a line impedance stabilization network (LISN). The excess length of the power cord between the EUT and the LISN shall be folded back and forth at the center of the lead to form a bundle not exceeding 40cm in length.

The EUT was tested in a typical model of operation in accordance with ANSI C63.4, Pre-test was performed in peak and average detection mode. Final measurement was performed using quasi-peak and average detection on the live and neutral lines with the worst case. If the result of the measurement with the Quasi Peak detector is below the Average limit, the measurement with Average Detector may be omitted.

The test software Rohde & Schwarz EMC32 (Version: 9.26.00) was used during the test. For test results, please refer to the attached appendix 1.

5.2 Radiated Emission

RESULT:**Pass**

Date of testing : Refer to appendix 1
Test procedure : ANSI C63.4:2014
ANSI C63.4:2014 amended as per ANSI C63.4a-2017,
Clause 8.3
Equipment class : B
Limits : FCC 47 CFR Part 15 Subpart B section 15.109 (a), limit for Class
B equipment.
ICES-005 Issue 5 2018, Limits for Alternative 1, Table 4

Test Setup

Input voltage : Refer to appendix 1
Operation mode : A(Worst mode)
Temperature : Refer to appendix 1
Humidity : Refer to appendix 1
Air pressure : Refer to appendix 1

Test procedure:

For tabletop device, the EUT and its peripherals were placed on a wooden table, 80cm above ground plane in semi-anechoic chamber. For floor-standing equipment, the EUT and all cables shall be insulated, if required, from the ground plane by up to 12mm of insulating material in semi-anechoic chamber.

The EUT was set 3 meters away from the receiving antenna, which was mounted on a variable-height antenna tower. Test shall be made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna height shall be varied from 1m to 4m. The table was rotated 360 degrees to detect the suspected emission frequency points. The position of the worst radiation case with both horizontal and vertical receiving antenna polarization was recorded together with the suspected emission frequency points above-mentioned.

The EUT was tested in a typical model of operation in accordance with ANSI C63.4, Pre-test was performed in peak detection mode. Final measurement was performed using quasi-peak detection with the worst case.

The test software Rohde & Schwarz EMC32 (Version: 9.25.00) was used during the test.

The highest frequency of the internal sources of the EUT is 2480MHz. The measurement shall be made up to 5th harmonic of the highest frequency, which is 12400MHz.

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

6 List of Tables

Table 1: List of Test and Measurement Equipment.....	4
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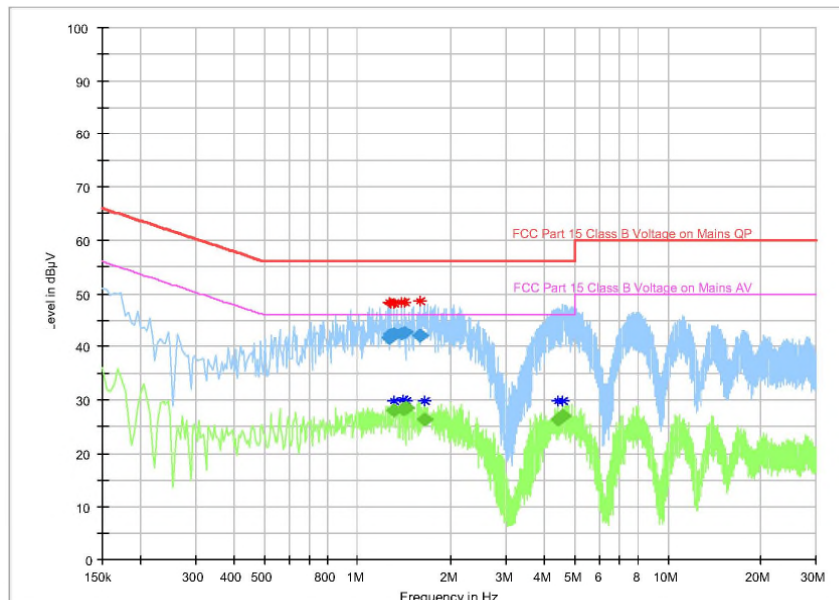
EMC Test Record (EMISSION)

Test Information

Manufacturer:
Test Item: Self-ballasted LED lamp
Identification: LED2102G3
Test Standard: FCC Part 15 B
Test Detail: Conducted Emission
Operation Mode: A
Climate Condition: 22°C; 50%RH; 101 kPa.
Test Voltage/ Freq.: AC 120V/60Hz
Port / Line: AC Mains
Receipt No.: 170305990
Report No.: /
Result: Pass
Comment: /

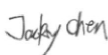
Hardware Setup: 1phase LISN ENV216 to ESCI 3
Level Unit: dB μ V

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCI 3



Tested by: 

20220516

Reviewed by: 

20220523

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TUV Rheinland (Guangdong) Ltd.

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Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter
1.257000	41.59	---	56.00	14.41	1000.0	9.000	N	OFF
1.270500	42.28	---	56.00	13.72	1000.0	9.000	N	OFF
1.306500	---	28.12	46.00	17.88	1000.0	9.000	N	OFF
1.306500	42.36	---	56.00	13.64	1000.0	9.000	N	OFF
1.383000	42.45	---	56.00	13.55	1000.0	9.000	N	OFF
1.405500	---	28.22	46.00	17.78	1000.0	9.000	L1	OFF
1.419000	42.69	---	56.00	13.31	1000.0	9.000	L1	OFF
1.437000	---	28.52	46.00	17.48	1000.0	9.000	N	OFF
1.590000	42.01	---	56.00	13.99	1000.0	9.000	N	OFF
1.635000	---	26.30	46.00	19.70	1000.0	9.000	N	OFF
4.443000	---	26.44	46.00	19.56	1000.0	9.000	L1	OFF
4.582500	---	26.92	46.00	19.08	1000.0	9.000	L1	OFF

Tested by:

Jim Chen

20220516

Reviewed by:

Jacky Chen

20220523

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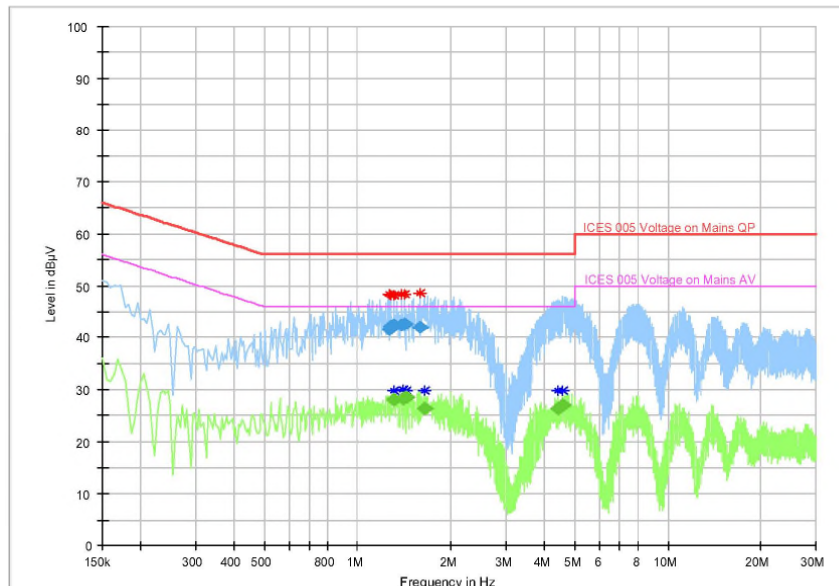
EMC Test Record (EMISSION)

Test Information

Manufacturer:
Test Item: Self-ballasted LED lamp
Identification: LED2102G3
Test Standard: ICES 005
Test Detail: Conducted Emission
Operation Mode: A
Climate Condition: 22°C; 50%RH; 101 kPa.
Test Voltage/ Freq.: AC 120V/60Hz
Port / Line: AC Mains
Receipt No.: 170305990
Report No.: /
Result: Pass
Comment: /

Hardware Setup: 1phase LISN ENV216 to ESCI 3
Level Unit: dB μ V

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
9kHz - 150kHz	Peak	200Hz	100Hz	50ms	ESCI 3
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCI 3



Tested by:

Jim Chen

20220530

Reviewed by:

Jacky Chen

20220531

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Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter
1.257000	41.59	---	56.00	14.41	1000.0	9.000	N	OFF
1.270500	42.28	---	56.00	13.72	1000.0	9.000	N	OFF
1.306500	42.36	---	56.00	13.64	1000.0	9.000	N	OFF
1.306500	---	28.12	46.00	17.88	1000.0	9.000	N	OFF
1.383000	42.45	---	56.00	13.55	1000.0	9.000	N	OFF
1.405500	---	28.22	46.00	17.78	1000.0	9.000	L1	OFF
1.419000	42.69	---	56.00	13.31	1000.0	9.000	L1	OFF
1.437000	---	28.52	46.00	17.48	1000.0	9.000	N	OFF
1.590000	42.01	---	56.00	13.99	1000.0	9.000	N	OFF
1.635000	---	26.30	46.00	19.70	1000.0	9.000	N	OFF
4.443000	---	26.44	46.00	19.56	1000.0	9.000	L1	OFF
4.582500	---	26.92	46.00	19.08	1000.0	9.000	L1	OFF

Tested by:

Jim Chen

20220530

Reviewed by:

Jacky Chen

20220531

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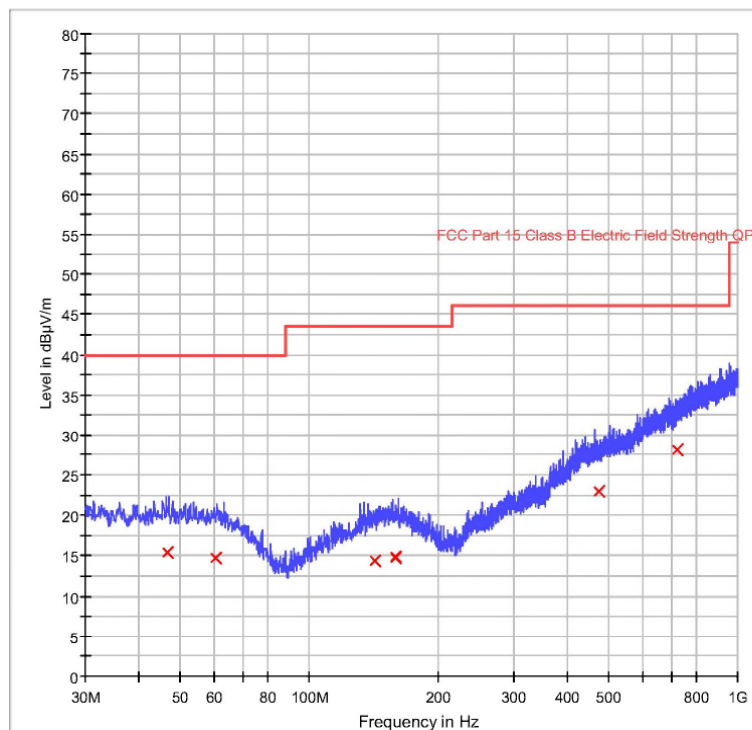
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Self-ballasted LED lamp
Identification:	LED2102G3
Test Standard:	FCC Part 15B
Test Detail:	Radiated Emission
Operation Mode:	A
Climate Condition:	21 °C, 52 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170305990
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency range:	30-1000MHz
Receiver:	ESW 8
Transducer:	VULB9168



Tested by

Jason Li

Reviewed by

Jacky Chen

Date:

20220519

Date:

20220523

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EMC Test Service Hotline: +86-20-28391188

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
46.600000	15.4	1000.0	120.000	H	20.6	24.6	40.0	
60.680000	14.7	1000.0	120.000	H	20.1	25.3	40.0	
142.880000	14.4	1000.0	120.000	H	20.8	29.1	43.5	
159.360000	14.8	1000.0	120.000	H	21.0	28.7	43.5	
159.360000	14.9	1000.0	120.000	H	21.0	28.6	43.5	
473.640000	22.9	1000.0	120.000	H	26.8	23.1	46.0	
720.160000	28.1	1000.0	120.000	H	32.1	17.9	46.0	

Tested by

Jason Li

Reviewed by

Jacky Chen

Date:

20220519

Date:

20220523

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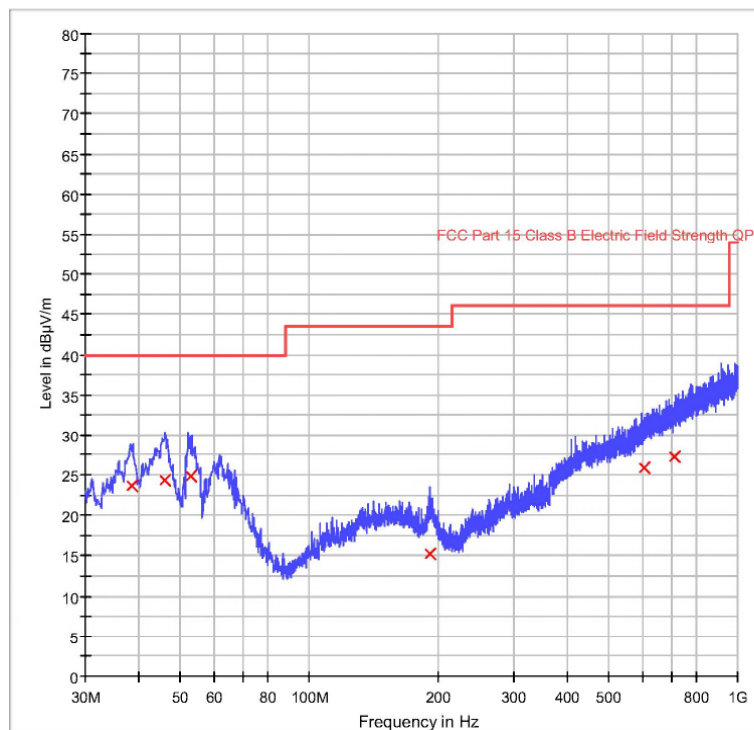
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Self-ballasted LED lamp
Identification:	LED2102G3
Test Standard:	FCC Part 15B
Test Detail:	Radiated Emission
Operation Mode:	A
Climate Condition:	21 °C, 52 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170305990
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency range:	30-1000MHz
Receiver:	ESW 8
Transducer:	VULB9168



Tested by

Jason Li

Reviewed by

Jacky Chen

Date:

20220519

Date:

20220523

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Test Report No.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)	Comment
38.600000	23.7	1000.0	120.000	V	19.9	16.3	40.0	
46.000000	24.4	1000.0	120.000	V	20.6	15.6	40.0	
53.040000	24.8	1000.0	120.000	V	20.7	15.2	40.0	
191.520000	15.3	1000.0	120.000	V	18.5	28.2	43.5	
606.920000	25.8	1000.0	120.000	V	29.9	20.2	46.0	
710.200000	27.2	1000.0	120.000	V	31.3	18.8	46.0	

Tested by

Jason Li

Reviewed by

Jacky Chen

Date:

20220519

Date:

20220523

Prüfbericht - Nr.:
Test Report No.

CN22PBBM 001

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TUV Rheinland (Guangdong) Ltd.

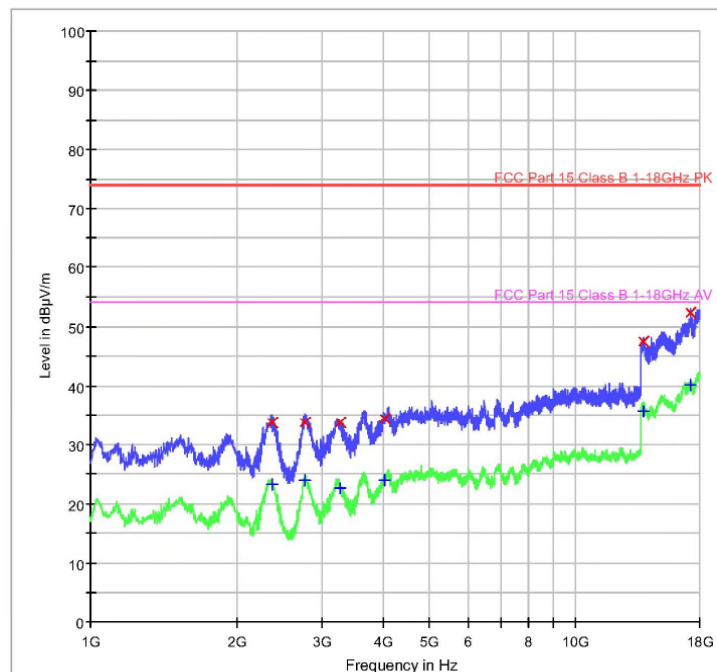
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Self-ballasted LED lamp
Identification:	LED2102G3
Test Standard:	FCC Part 15B
Test Detail:	Radiated Emission
Operation Mode:	A
Climate Condition:	21 °C, 52 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170305990
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal
Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-06_1GHz-18GHz_With PreAMP EXT& Hight-pass filter



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
2368.000000	23.2	1000.0	1000.000	H	-13.4	50.8	74.0
2770.000000	24.0	1000.0	1000.000	H	-11.8	50.1	74.0
3265.000000	22.5	1000.0	1000.000	H	-10.5	51.5	74.0
4043.000000	24.0	1000.0	1000.000	H	-8.4	50.1	74.0
13767.000000	35.7	1000.0	1000.000	H	2.9	38.3	74.0
17201.000000	40.1	1000.0	1000.000	H	8.3	33.9	74.0

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
2368.000000	33.6	1000.0	1000.000	H	-13.4	40.4	74.0
2770.000000	33.6	1000.0	1000.000	H	-11.8	40.4	74.0
3265.000000	33.6	1000.0	1000.000	H	-10.5	40.4	74.0
4043.000000	34.4	1000.0	1000.000	H	-8.4	39.6	74.0
13767.000000	47.5	1000.0	1000.000	H	2.9	26.5	74.0
17201.000000	52.3	1000.0	1000.000	H	8.3	21.7	74.0

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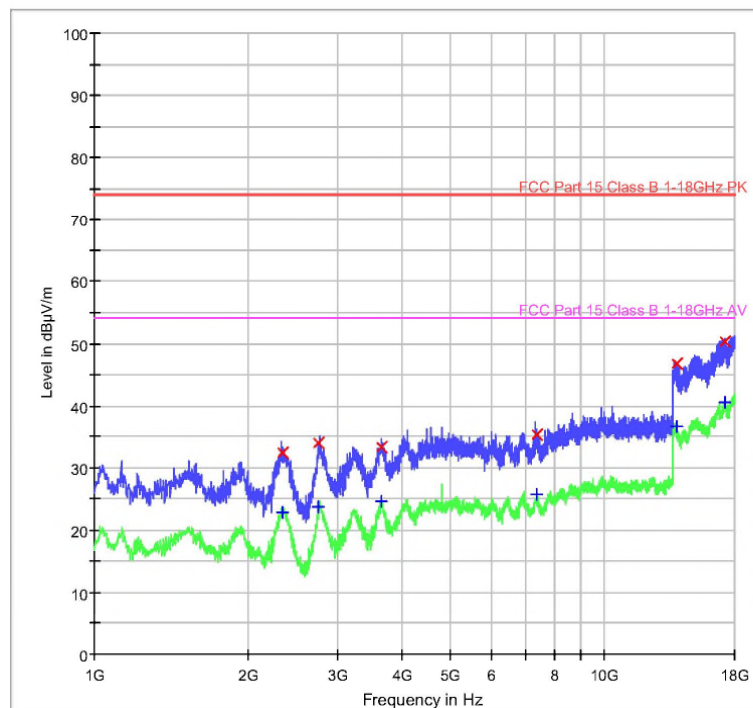
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	Self-ballasted LED lamp
Test Item:	LED2102G3
Identification:	LED2102G3
Test Standard:	FCC Part 15B
Test Detail:	Radiated Emission
Operation Mode:	A
Climate Condition:	21 °C, 52 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170305990
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical
Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-06_1GHz-18GHz_With PreAMP EXT& Hight-pass filter



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	PoI	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
2332.000000	22.8	1000.0	1000.000	H	-13.5	51.2	74.0
2755.000000	23.6	1000.0	1000.000	H	-11.9	50.4	74.0
3654.000000	24.7	1000.0	1000.000	H	-9.5	49.3	74.0
7381.000000	25.8	1000.0	1000.000	H	-2.9	48.2	74.0
13831.000000	36.6	1000.0	1000.000	H	2.8	37.4	74.0
17254.000000	40.5	1000.0	1000.000	H	8.3	33.5	74.0

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	PoI	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
2332.000000	32.5	1000.0	1000.000	H	-13.5	41.5	74.0
2755.000000	34.0	1000.0	1000.000	H	-11.9	40.0	74.0
3654.000000	33.3	1000.0	1000.000	H	-9.5	40.7	74.0
7381.000000	35.2	1000.0	1000.000	H	-2.9	38.8	74.0
13831.000000	46.7	1000.0	1000.000	H	2.8	27.3	74.0
17254.000000	50.2	1000.0	1000.000	H	8.3	23.8	74.0

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TUV Rheinland (Guangdong) Ltd.

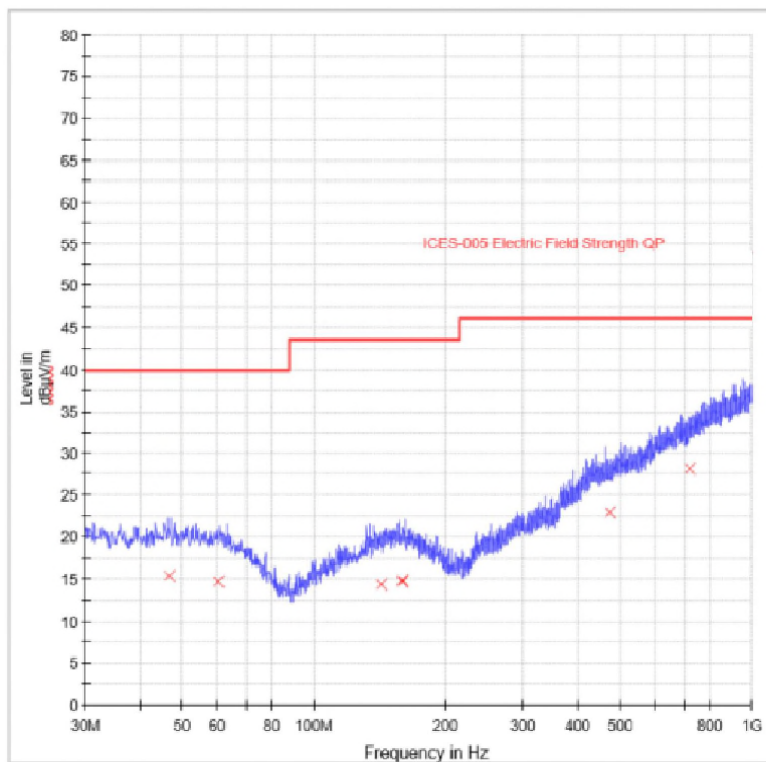
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Self-ballasted LED lamp
Identification:	LED2102G3
Test Standard:	ICES 005
Test Detail:	Radiated Emission
Operation Mode:	A
Climate Condition:	21 °C, 52 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170305990
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency range:	30-1000MHz
Receiver:	ESW 8
Transducer:	VULB9168



Tested by

Jason Li

Reviewed by

Jacky Chen

Date: 20220530

Date: 20220531

Prüfbericht - Nr.:
Test Report No.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
46.600000	15.4	1000.0	120.000	H	20.6	24.6	40.0	
60.680000	14.7	1000.0	120.000	H	20.1	25.3	40.0	
142.880000	14.4	1000.0	120.000	H	20.8	29.1	43.5	
159.360000	14.8	1000.0	120.000	H	21.0	28.7	43.5	
159.360000	14.9	1000.0	120.000	H	21.0	28.6	43.5	
473.640000	22.9	1000.0	120.000	H	26.8	23.1	46.0	
720.160000	28.1	1000.0	120.000	H	32.1	17.9	46.0	

Tested by

Jason Li

Reviewed by

Jacky Chen

Date:

20220530

Date:

20220531

Prüfbericht - Nr.:
Test Report No.

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TUV Rheinland (Guangdong) Ltd.

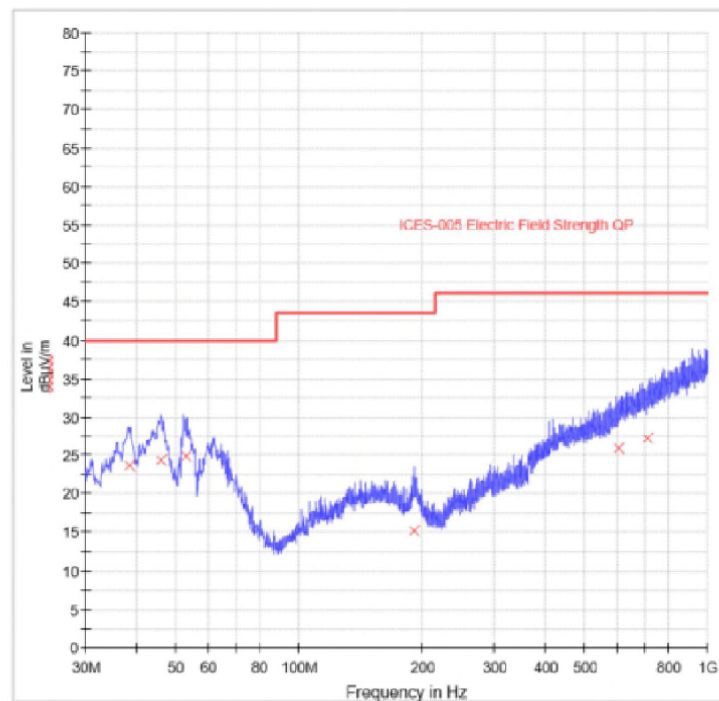
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Self-ballasted LED lamp
Identification:	LED2102G3
Test Standard:	ICES 005
Test Detail:	Radiated Emission
Operation Mode:	A
Climate Condition:	21 °C, 52 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170305990
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency range:	30-1000MHz
Receiver:	ESW 8
Transducer:	VULB9168



Tested by *Jason Li*

Reviewed by

Jacky Chen

Date: 20220530

Date: 20220531

Prüfbericht - Nr.:
Test Report No.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)	Comment
38.600000	23.7	1000.0	120.000	V	19.9	16.3	40.0	
46.000000	24.4	1000.0	120.000	V	20.6	15.6	40.0	
53.040000	24.8	1000.0	120.000	V	20.7	15.2	40.0	
191.520000	15.3	1000.0	120.000	V	18.5	28.2	43.5	
606.920000	25.8	1000.0	120.000	V	29.9	20.2	46.0	
710.200000	27.2	1000.0	120.000	V	31.3	18.8	46.0	

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Table 1: List of Test and Measurement Equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Until	Cal Date
Disturbance Voltage					
EMI Test Receiver	Rohde&Schwarz	ESCI 3	100216	2023-03-04	2022-03-05
Two-Line V-Network	Rohde&Schwarz	ENV216	100195	2023-03-04	2022-03-05
Radiated disturbances (30 MHz – 1000 MHz)					
EMI Test Receiver	Rohde & Schwarz	ESW8	101312	2023-03-04	2022-03-05
Trilog-Broadband Antenna	Schwarzbeckmess-elektronik	VULB9168	684	2023-08-24	2021-08-23
Radiated disturbances (1GHz – 18 GHz)					
Double-Ridged Horn Antenna	Rohde & Schwarz	HF907	100377	2022-10-27	2020-10-28
Pre-Amplifier(1-18GHz)	MITEQ	AFS44-00101800-25-10P-44	1934457	2023-03-03	2022-03-04
Spectrum Analyzer	Rohde & Schwarz	FSP30	100286	2022-11-30	2021-11-30