



EXEMPTION TEST REPORT

COMMISSION REGULATION (EU) 2019/2020

COMMISSION DELEGATED REGULATION (EU) 2019/2015

Report Reference No.: AOC250711009ER

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Approved by (print+ signature).....: Robin Liu

Robin Liu

Lab Supervisor

Date of issue.....: 2025-07-21

Testing Laboratory.....: Shenzhen AOCE Electronic Technology Service Co., Ltd

Address.....: Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China

Testing location/address.....: Same as above

Applicant's name.....: Shenzhen Bo Xin Rui Electronic Co., Ltd

Address.....: 3B-16, No.24, Zhongxin Road, Shaqi Community, Xinqiao Street Baoan District, Shenzhen Guangdong

Manufacturer name.....: Shenzhen Bo Xin Rui Electronic Co., Ltd

Address.....: 3B-16, No.24, Zhongxin Road, Shaqi Community, Xinqiao Street Baoan District, Shenzhen Guangdong

Test Object.....: LED string lights

Trade Mark.....: N/A

Model / Type reference.....: JT-EL/FC, JT-EL/FC-20, JT-EL/FC-60, JT-EL/FC-80, JT-EL/FC-100, JT-EL/FC-1200, JT-EL/FC-50, JT-EL/FC-30 (Only the model names are different)

Rated voltage (V).....: 220-240V~

Rated frequency (Hz).....: 50/60Hz

Rated Power (W).....: 9 W

Rated luminous (lm).....: N/A

Rated color temperature (CCT).....: N/A

Rated color tendering (CRI).....: N/A

Rated life (h).....: 100000h

Test specification:

Standard.....: COMMISSION REGULATION (EU) 2019/2020; (EU) 2019/2015; COMMISSION DELEGATED REGULATION (EU) 2021/340; COMMISSION REGULATION (EU) 2021/341

Test procedure.....: Test report

Non-standard test method.....: N/A

Test Report Form No......: IECEE TRF No. (EU) 2019/2020

Test Report Form(s) Originator.....: AOCE

Master TRF.....: 2019-11-30

Summary of Testing:	
Tests performed (name of test and test clause):	Testing location:
The sample(s) tested complies with the requirements of COMMISSION REGULATION (EU) 2019/2020 and (EU) 2019/2015 for exemption When determining the test conclusion. The Measurement Uncertainty of test has be enconsidered.	Shenzhen AOCE Electronic Technology Service Co., Ltd Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Possible Test Case Verdicts:	
Test case does not apply to the test object.....:	N/A (Not Applicable)
Test object does meet the requirement.....:	P (Pass)
Test object does not meet the requirement.....:	F (Fail)
Name and address of factory.....:	Shenzhen Bo Xin Rui Electronic Co., Ltd 3B-16, No.24, Zhongxin Road, Shaqi Community, Xinqiao Street Baoan District, Shenzhen Guangdong
Testing:	
Ambient temperature of tested.....:	25.0 °C
Test inputs.....:	230V~
Sample size for tested.....:	1 pcs
Date of receipt of test item.....:	2025-07-09
Date (s) of performance of tests.....:	2025-07-09 to 2025-07-13
General Remarks:	
Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or use in part without prior written consent from Shenzhen AOCE Electronic Technology Service Co., Ltd	
General product information and other remarks:	
N/A	

(EU) 2019/2020& (EU) 2019/2015			
Clause	Requirement + Test	Result – Remark	Verdict
Article 2	Definitions		—
	“light source” means an electrically operated product intended to emit, or, in the case of a non-incandescent light source, intended to be possibly tuned to emit, light, or both, with all of the following optical characteristics:		—
-(a)	chromaticity coordinates x and y in the range $0,270 < x < 0,530$ and $-2,3172 x^2 + 2,3653 x - 0,2199 < y < -2,3172 x^2 + 2,3653 x - 0,1595$;	See test data table	—
-(b)	a luminous flux < 500 lumen per mm ² of projected light-emitting surface area		—
-(c)	a luminous flux between 60 and 82 000 lumen	See test data table	—
-(d)	a colour rendering index (CRI) > 0	See test data table	—
ANNEX III	Exemptions		P
1	This Regulation shall not apply to light sources and separate control gears specifically tested and approved to operate:		N/A
(a)	in potentially explosive atmospheres, as defined in Directive 2014/34/EU of the European Parliament and of the Council ⁽¹⁾ ;		N/A
(b)	for emergency use, as set out in Directive 2014/35/EU of the European Parliament and of the Council ⁽²⁾ ;		N/A
(c)	in radiological and nuclear medicine installations, as defined in Article 3 of Council Directive 2009/71/EURATOM ⁽³⁾ ;		N/A
(d)	in or on military or civil defence establishments, equipment, ground vehicles, marine equipment or aircraft, as set out in Member States' regulations or in documents issued by the European Defence Agency;		N/A
(e)	in or on motor vehicles, their trailers and systems, interchangeable towed equipment, components and separate technical units as set out in Regulation (EC) No 661/2009 ⁽⁴⁾ , (EU) No 167/2013 ⁽⁵⁾ and (EU) No 168/2013 of the European Parliament and of the Council ⁽⁶⁾ ;		N/A
(f)	in or on non-road mobile machinery as set out in Regulation (EU) 2016/1628 of the European Parliament and of the Council ⁽⁷⁾ and in or on their trailers;		N/A
(g)	in or on interchangeable equipment as set out in Directive 2006/42/EC of the European Parliament and of the Council ⁽⁸⁾ intended to be towed or to be mounted and fully raised from the ground or that cannot articulate around a vertical axis when the vehicle to which it is attached is in use on a road by vehicles as set out in Regulation (EU) No 167/2013;		N/A
(h)	in or on civil aviation aircraft, as set out in Commission Regulation (EU) No 748/2012 ⁽⁹⁾ ;		N/A
(i)	in railway vehicle lighting, as set out in Directive 2008/57/EC of the European Parliament and of the Council ⁽¹⁰⁾ ;		N/A

(EU) 2019/2020 & (EU) 2019/2015			
Clause	Requirement + Test	Result – Remark	Verdict
(j)	in marine equipment, as set out in Directive 2014/90/EU of the European Parliament and of the Council ⁽¹¹⁾ ;		N/A
(k)	in medical devices, as set out in Council Directive 93/42/EEC ⁽¹²⁾ or Regulation (EU) 2017/745 of the European Parliament and of the Council ⁽¹³⁾ and in vitro medical devices as set out in Directive 98/79/EC of the European Parliament and of the Council ⁽¹⁴⁾ .		N/A
	For the purpose of this point, 'specifically tested and approved' means that the light source or separate control gear:		N/A
	— has been specifically tested for the mentioned operating condition or application, according to the European legislation mentioned or related implementing measures, or relevant European or international standards, or, in the absence of these, according to relevant Member States legislation; and		N/A
	— is accompanied by evidence, to be included in the technical documentation, in the form of a certificate, a type approval mark, a test report, that the product has been specifically approved for the mentioned operating condition or application; and		N/A
	— is placed on the market specifically for the mentioned operating condition or application, as evidenced at least by the technical documentation, and except for point (d), information on the packaging and any advertising or marketing materials.		N/A
2	In addition, this Regulation shall not apply to:		N/A
(a)	double-capped fluorescent T5 light sources with power $P \leq 13$ W;		N/A
(b)	electronic displays (e.g. televisions, computer monitors, notebooks, tablets, mobile phones, e-readers, game consoles), including displays within the scope of Commission Regulation (EU) 2019/2021 ⁽¹⁵⁾ , and Commission Regulation (EU) No 617/2013 ⁽¹⁶⁾ ;		N/A
(c)	light sources and separate control gears in battery-operated products, including but not limited to e.g. torches, mobile phones with an integrated torch light, toys including light sources, desk lamps operating only on batteries, armband lamps for cyclists, solar-powered garden lamps;		N/A
(d)	light sources for spectroscopy and photometric applications, such as for example UV-VIS spectroscopy, molecular spectroscopy, atomic absorption spectroscopy, nondispersive infrared (NDIR), fourier-transform infrared (FTIR), medical analysis, ellipsometry, layer thickness measurement, process monitoring or environmental monitoring;		N/A
(e)	light sources and separate control gears on bicycles and other non-motorised vehicles.		N/A

(EU) 2019/2020& (EU) 2019/2015			
Clause	Requirement + Test	Result – Remark	Verdict
3	Any light source or separate control gear within the scope of this Regulation shall be exempt from the requirements of this Regulation, with the exception of the information requirements set out in point 3(e) of Annex II, if they are specifically designed and marketed for their intended use in at least one of the following applications:		N/A
(a)	signalling (including, but not limited to, road-, railway-, marine- or air traffic- signalling, traffic control or airfield lamps);		N/A
(b)	image capture and image projection (including, but not limited to, photocopying, printing (directly or in pre-processing), lithography, film and video projection, holography);		N/A
(c)	light sources with specific effective ultraviolet power > 2 mW/klm and intended for use in applications requiring high UV-content;		N/A
(d)	light sources with a peak radiation around 253,7 nm and intended for germicidal use (destruction of DNA);		N/A
(e)	light sources emitting 5 % or more of total radiation power of the range 250-800 nm in the range of 250-315 nm and/or 20 % or more of total radiation power of the range 250-800 nm in the range of 315-400 nm, and intended for disinfection or fly trapping;		N/A
(f)	light sources with the primary purpose of emitting radiation around 185,1 nm and intended to be used for the generation of ozone;		N/A
(g)	light sources emitting 40 % or more of total radiation power of the range 250-800 nm in the range of 400-480 nm, and intended for coral zooxanthellae symbioses;		N/A
(h)	FL light sources emitting 80 % or more of total radiation power of the range 250-800 nm in the range of 250-400 nm, and intended for sun-tanning;		N/A
(i)	HID light sources emitting 40 % or more of total radiation power of the range 250-800 nm in the range of 250-400 nm, and intended for sun-tanning;		N/A
(j)	light sources with a photosynthetic efficacy > 1,2 µmol/J, and/or emitting 25 % or more of total radiation power of the range 250-800 nm in the range of 700-800 nm, and intended for use in horticulture;		N/A
(k)	HID light sources with correlated colour temperature CCT > 7 000 K and intended for use in applications requiring such a high CCT;		N/A
(l)	light sources with a beam angle of less than 10° and intended for spot-lighting applications requiring a very narrow light beam;		N/A

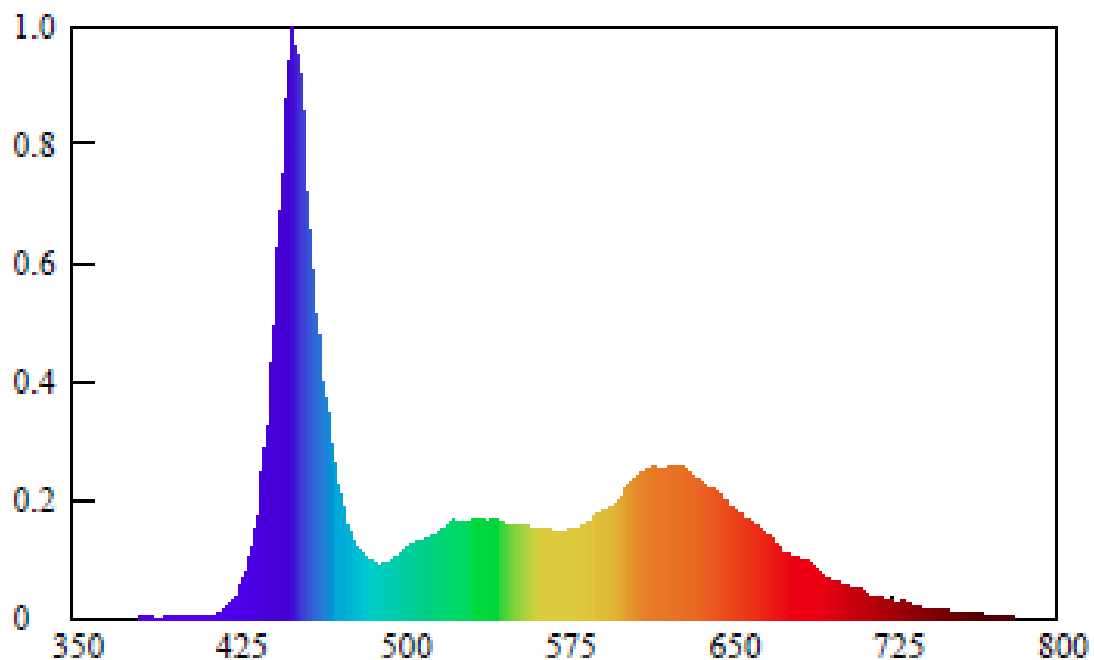
(EU) 2019/2020& (EU) 2019/2015												
Clause	Requirement + Test	Result – Remark	Verdict									
(m)	halogen light sources with cap-type G9.5, GX9.5, GY9.5, GZ9.5, GZX9.5, GZY9.5, GZZ9.5, K39d, G9.5HPL, G16d, GES/E40 (low voltage (24V) silver crown only), GX16, GX16d, GY16, G22, G38, GX38, GX38Q, P28s, P40s, PGJX28, PGJX 36, PGJX50, R7s with a luminous flux > 12 000 lm, QXL, designed and marketed specifically for scene-lighting use in film studios, TV studios, and photographic studios, or for stage-lighting use in theatres, discos and during concerts or other entertainment events;		N/A									
(n)	colour-tuneable light sources that can be set to at least the colours listed in this point and which have for each of these colours, measured at the dominant wavelength, a minimum excitation purity of: <table><tr><td>Blue</td><td>440nm — 490nm</td><td>90 %</td></tr><tr><td>Green</td><td>520nm — 570nm</td><td>65 %</td></tr><tr><td>Red</td><td>610nm — 670nm</td><td>95 %</td></tr></table> and are intended for use in applications requiring high-quality coloured light;	Blue	440nm — 490nm	90 %	Green	520nm — 570nm	65 %	Red	610nm — 670nm	95 %		N/A
Blue	440nm — 490nm	90 %										
Green	520nm — 570nm	65 %										
Red	610nm — 670nm	95 %										
(o)	light sources accompanied by an individual calibration certificate detailing the exact radiometric flux and/or spectrum under specified conditions, and intended for use in photometric calibration (of e.g. wavelength, flux, colour temperature, colour rendering index), or for laboratory use or quality control applications for the evaluation of coloured surfaces and materials under standard viewing conditions (e.g. standard illuminants);		N/A									
(p)	light sources provided specifically for use by photosensitive patients, to be sold in pharmacies and other authorised selling points (e.g. suppliers of disability products), upon presentation of a medical prescription;		N/A									
(q)	incandescent light sources (not including halogen light sources) fulfilling all of the following conditions: power ≤ 40 W, length ≤ 60 mm, diameter ≤ 30 mm, declared suitable for operation at ambient temperature ≥ 300 °C, and intended for use in high temperature applications such as ovens;		N/A									
(r)	halogen light sources fulfilling all of the following conditions: cap-type G4, GY6.35 or G9, power ≤ 60 W, declared suitable for operation at ambient temperature ≥ 300 ° C, and intended for use in high temperature applications such as ovens;		N/A									
(s)	halogen light sources with blade contact-, metal lug-, cable-, litz wire- or non-standard customised electrical interface, specifically designed and marketed for industrial or professional electro-heating equipment (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, gluing, inks, paint and coating hardening);		N/A									
(t)	halogen light sources fulfilling all of the following conditions: R7s cap, CCT ≤ 2 500 K, length not in the ranges 75-80 mm and 110-120 mm, specifically designed and marketed for industrial or professional electro-heating equipment (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, gluing, inks, paint and coating hardening);		N/A									

(EU) 2019/2020& (EU) 2019/2015			
Clause	Requirement + Test	Result – Remark	Verdict
(u)	single capped fluorescent lamps (CFLni) having a diameter of 16 mm (T5), 2G11 4 pin base, with CCT = 3 200 K and chromaticity coordinates $x = 0,415$ $y = 0,377$, or with CCT = 5 500 K and chromaticity coordinates $x = 0,330$ $y = 0,335$, specifically designed and marketed for studio and video applications for traditional filmmaking;		N/A
(v)	LED or OLED light sources, complying with the definition of 'original works of art' as defined in Directive 2001/84/EC of the European Parliament and of the Council (17), made by the artist him/herself in a limited number below 10 pieces;		N/A
(w)	white light sources which		N/A
-(1)	are designed and marketed specifically for scene-lighting use in film-studios, TV-studios and locations, and photographic-studios and locations, or for stage-lighting use in theatres, during concerts or other entertainment events;		N/A
-(2)	provide two or more of the following specifications:		N/A
--(a)	LED with high CRI > 90;		N/A
--(b)	GES/E40, K39d socket with changeable Colour Temperature down to 1 800 K (undimmed), used with low voltage power supply;		N/A
--(c)	LED rated at 180W and greater and arranged to direct output to an area smaller than the light emitting surface;		N/A
--(d)	DWE lamp type which is a tungsten lamp defined by its wattage (650 W) voltage (120 V) and terminal type (pressure screw terminal);		N/A
--(e)	white bi-colour LED sources;		N/A
--(f)	fluorescent tubes: Min BI Pin T5 and Bi Pin T7 With CRI ≥ 85 and CCT 2 900, 3 000, 3 200, 5 600 or 6 500 K.		N/A

Table

Test Data Table

Model No.:	JT-EL/FC					
Sample No.	P _{on} (W)	No-load power P _{no} (W)	P _{sb} (W)	P _{net} (W)	Chromaticity Coordinates	
					x	y
S01	4.3	--	--	--	0.2914	0.2210
Verdict	—	—	—	—	☒ Exempt ☐ Not exempt	
Sample No.	Useful luminous flux Φ _{use} (lm)	CCT(K)	CRI	SDCM	R9	Displacement factor
S01	10.72	20870	57.7	84.7	-106	--
Verdict	☒ Exempt ☐ Not exempt	—	☐ Exempt ☒ Not exempt	—	—	—
Conclusion	☒ Exempt ☐ Not exempt					

Spectral Distribution:

Table

Test Equipment List

Equipment Name	Manufacturer	Model No.	Reference No.	Calibration Due Date
2m Integrating Sphere	SENSING	SL-300	AOC-S-126	2026-04-13
Horizontal Distribution Photometer	SENSING	GMS1800D	AOC-S-124	2026-04-13
Standard Lamp	SENSING	240V/150W	AOC-S-151	2025-08-01
Digital power meter	HENGHE	WT310E	AOC-S-012	2026-04-13
Digital power meter	SENSING	UI2008	AOC-S-123	2026-04-13
Digital power meter	SENSING	UI2021	AOC-S-123	2026-04-13
DC source	OYHS	OYHS-Z120V-50A	AOC-S-062	2026-04-13
Variable frequency power supply	WOSEN	BP6005	AOC-S-129	2026-04-13
Variable frequency power supply	AIPUSI	KDF-500	AOC-S-130	2026-04-13
Oscilloscope	TEKTRONIX	MDO3012	AOC-S-028	2026-04-13

Product Photo

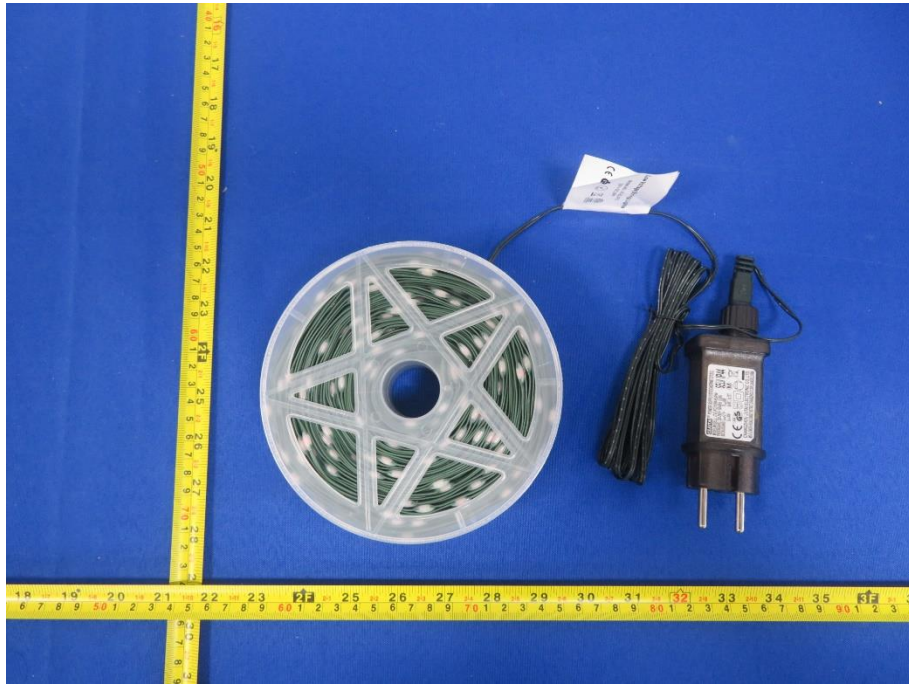


Fig. 1



Fig. 2

-- End of Report --