



TEST REPORT

REPORT NO.: LCSE07133007S

Leo Qiu Alam Reng

COMMISSION REGULATION (EU) 2019/2020 of 1 October 2019

laying down ecodesign requirements for light sources and separate control gears pursuant to Directive 2009/125/EC of the European Parliament and of the Council

Report reference No.....: LCSE07133007S

Tested by...... Laola Li (Project Engineer)

Check by...... Leo Qiu (Director)

Approved by...... Adam Peng (Manager)

Date of issue July 17, 2023

Contents.....: 14 pages

Testing laboratory

Name Ningbo LCS Standard Technology Service Co., Ltd.

Address : 101-106, 202-206, Building 037, No. 166, Jinghua Road, Meixu

Street, Ningbo High-tech Zone, Yinzhou District, Ningbo City,

Zhejiang Province, China

Testing location: As above

Client

Name JINHUA DELUXE HOMEART CO., LTD

Address...... ROOM407, DONGSHIBEI STREET NO.1938, JINHUA, ZHEJIANG

Manufacturer

Name JINHUA DELUXE HOMEART CO., LTD

Address.....: ROOM407, DONGSHIBEI STREET NO.1938, JINHUA, ZHEJIANG

Test specification

Standard.....: COMMISSION REGULATION (EU) 2019/2020 of 1 October 2019

COMMISSION DELEGATED REGULATION (EU) 2019/2015

COMMISSION DELEGATED REGULATION (EU) 2021/340

COMMISSION REGULATION (EU) 2021/341

Test procedure COMMISSION REGULATION (EU) 2019/2020 of 1 October 2019

COMMISSION DELEGATED REGULATION (EU) 2019/2015

COMMISSION DELEGATED REGULATION (EU) 2021/340

COMMISSION REGULATION (EU) 2021/341

Non-standard test methodN/A





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Test item Description LED CANDLE LIGHT

Trademark: N/A

Rating(s)(V/Hz)....: DC 4.5V

Test case verdicts

Test case does not apply to the test object: N(N/A) Test item does meet the requirement......: P(Pass) Test item does not meet the requirement..: F(Fail)

Testing

Date of receipt of test item July 14, 2023

Date(s) of performance of test...... July 14, 2023 – July 16, 2023

Attachments:

The test report includes: ATTACHMENT 1(S) of Photos

Summary of testing:

- The product only supports the battery power supply.

- After evaluation, the products belong to exempted products

Equipment List:

Instrument	Equipment ID	Model	Calibration Date	Calibration Due Date
Full-field Speed	NLCS-S-124	GMS-1800B	2023/5/29	2024/5/28
Goniophotometer	1 ST ICS IS		SI LCS IS	VSI LCS IO
Digital Power Meter	NLCS-S-006	PF9800	2023/5/29	2024/5/28
AC Testing Power Source	NLCS-S-125	APW-110N	2023/5/29	2024/5/28
2m Integrating Sphere System	NLCS-S-120	SL-300	2023/5/29	2024/5/28
Digital Power Meter	NLCS-S-122	UI2012	2023/5/29	2024/5/28
AC Testing Power Source	NLCS-S-121	BP6005	2023/5/29	2024/5/28
Standard Lamp	NLCS-S-123	110V/300W	2023/6/19	2024/6/18
Temperature and humidity meter	NLCS-S-076	HTC-1	2023/5/25	2024/5/24
Flicker Photometer	NLCS-S-127	FK-3000	2023/5/29	2024/5/28



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The test results presented in this report relate only to the object tested.

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"(see Enclosure #)" refers to additioal information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

The general information of applicant and manufacturer (such as the name and address), product name, model/type reference, trademark and other similar information contained in this report are all provided by the applicant, the laboratory is not responsible for verifying its authenticity.















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Requirement Test Clause Result Remark Verdict Measurement methods Ρ Recognised state of art measurement methods Р incl. the one published in the Official Journal taking into account the measurement methods of (EU) 2019/2020 1 Regulation (EU) 2019/2020 - Exempted products Ρ 1.1 Product does not meet a definition of point (1) or (2) of Article 2 of (EU) 2019/2020 N/A N/A Is a product with one of following optical characteristics 1.1.1 (not fulfill the definition of light source) (point (1) of Article 2 of (EU) 2019/2020) chromaticity coordinates x and y are not in the N/A 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 a luminous flux ≥ 500 lumen per mm² of projected N/A (b) light-emitting surface area as defined in Annex I N/A a luminous flux < 60 or > 82 000 lumen (c) a colour rendering index (CRI) = 0 N/A (d) Product does have one of following characteristics N/A 1.1.2 (not fulfill the definition of light source)(point (1) of Article 2 of (EU) 2019/2020) LED dies or LED chips N/A (a) (b) LED packages N/A products containing light source(s) from which N/A these light source(s) can be removed for (c) verification light-emitting parts contained in a light source from N/A which these parts can be removed for verification (d) as a light source Product with one of following optical characteristics N/A 1.1.3 (not fulfill the definition of control gear) (point (2) of Article 2 of (EU) 2019/2020) Is a power supply within the scope of Commission N/A (a) Regulation (EC) No 278/2009 Is a lighting control parts or non-lighting parts (as N/A defined in Annex I), although such parts may be (b) physically integrated with a control gear or marketed together as a single product 'Power-over-Ethernet switch or' or 'PoE switch', N/A which means equipment for power-supply and data-handling that is installed between the mains (c) and office equipment and/or light sources for the purpose of data transfer and power supply 1.2 Exemptions product (point 1 and 2 of Annex III of (EU) 2019/2020) Ρ



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Clause	Requirement Test	Result Remark	Verdict				
1.2.1	This Regulation shall not apply to light sources and separate control gears specifically tested and approved to operate:						
(a)	in potentially explosive atmospheres, as defined in Directive 2014/34/EU of the European Parliament and of the Council		N/A				
(b)	for emergency use, as set out in Directive 2014/35/EU of the European Parliament and of the Council		N/A				
(c)	in radiological and nuclear medicine installations, as defined in Article 3 of Council Directive 2009/71/EURATOM		N/A				
(d) (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	CSTE	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, (EU) No 167/2013 and (EU) No 168/2013 of the European Parliament and of the Council		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 and in or on their trailers	TO HE	N/A				
识检测的La	in or on interchangeable equipment as set out in	古讯检测报记	N/A				
	Directive 2006/42/EC of the European Parliament and of the Council intended to be towed or to be	工 Tin 拉测 Mac Lab LCS Testing Lab	ST CS Te				
(g)	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						
(h)	in or on civil aviation aircraft, as set out in Commission Regulation (EU) No 748/2012		N/A				
(i)	in railway vehicle lighting, as set out in Directive 2008/57/EC of the European Parliament and of the Council		N/A				
(j)	in marine equipment, as set out in Directive 2014/90/EU of the European Parliament and of the Council	。 上海怜	N/A				
(k)	in medical devices, as set out in Council Directive 93/42/EEC or Regulation (EU) 2017/745 of the European Parliament and of the Council and in vitro medical devices as set out in Directive 98/79/EC of the European Parliament and of the Council	LCS Te	N/A				
1.2.2	In addition, this Regulation shall not apply to		N/A				
(a)	double-capped fluorescent T5 light sources with power P ≤ 13 W		N/A				









Remark Requirement Clause Test Result Verdict electronic displays (e.g. televisions, computer N/A monitors, notebooks, tablets, mobile phones, ereaders, game consoles), including displays within (b) the scope of Commission Regulation (EU) 2019/2021 (15), and Commission Regulation (EU) No 617/2013 light sources and separate control gears in Ρ battery-operated products, including but not limited to e.g. torches, mobile phones with an (c) integrated torch light, toys including light sources, desk lamps operating only on batteries, armband lamps for cyclists, solar-powered garden lamps light sources for spectroscopy and photometric N/A applications, such as for example UV-VIS spectroscopy, molecular spectroscopy, atomic absorption spectroscopy, nondispersive infrared (d) (NDIR), fourier-transform infrared (FTIR), medical analysis, ellipsometry, layer thickness measurement, process monitoring or environmental monitoring light sources and separate control gears on N/A (e) bicycles and other non-motorised vehicles 2 Regulation (EU) 2019/2020 - special purpose products Ρ Any light source or separate control gear within the scope of this Regulation shall N/A 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 2.1 designed and marketed for their intended use in at least one of the following applications (point 3 of Annex III of (EU) 2019/2020) signalling (including, but not limited to, road-, N/A (a) railway-, marine- or air traffic- signalling, traffic control or airfield lamps) image capture and image projection (including, N/A but not limited to, photocopying, printing (directly (b) or in preprocessing), lithography, film and video projection, holography) light sources with specific effective ultraviolet N/A power > 2 mW/klm and intended for use in (c) applications requiring high UV-content light sources with a peak radiation around 253,7 N/A nm and intended for germicidal use (destruction of (d) DNA) light sources emitting 5 % or more of total N/A radiation power of the range 250-800 nm in the range of 250-315 nm and/or 20 % or more of total (e) radiation power of the range 250-800 nm in the range of 315-400 nm, and intended for disinfection or fly trapping light sources with the primary purpose of emitting N/A (f) radiation around 185,1 nm and intended to be used for the generation of ozone







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Clause	Requirement Test	Result Remark	Verdict
(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 suntanning		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 suntanning		N/A
(j) (ii)	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	LCS TO	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
(1)	light sources with a beam angle of less than 10° and intended for spot-lighting applications requiring a very narrow light beam		N/A
和检测股份 (m) sting La	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	工訊检测股份 LCS Testing Lab	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: and are intended for use in applications requiring		N/A
(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	Les Te	N/A





Clause Requirement Test Result Remark Verdict under standard viewing conditions (e.g. standard illuminants) light sources provided specifically for use by N/A photosensitive patients, to be sold in pharmacies and other authorized selling points (e.g. suppliers (p) of disability products), upon presentation of a medical prescription incandescent light sources (not including halogen N/A light sources) fulfilling all of the following conditions: power ≤ 40 W, length ≤ 60 mm, (q) diameter ≤ 30 mm. declared suitable for operation at ambient temperature ≥ 300 °C, and intended for use in high temperature applications such as ovens halogen light sources fulfilling all of the following N/A conditions: cap-type G4, GY6.35 or G9, power ≤ 60 W, declared suitable for operation at ambient (r) temperature ≥ 300 °C, and intended for use in high temperature applications such as ovens halogen light sources with blade contact-, metal N/A lug-, cable-, litz wire- or non-standard customised electrical interface, specifically designed and marketed for industrial or professional electro-(s) heating equipment (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, gluing, inks, paint and coating hardening) halogen light sources fulfilling all of the following N/A 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 (t) or professional electroheating equipment (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, gluing, inks, paint and coating hardening) single capped fluorescent lamps (CFLni) having a N/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 Kand (u) chromaticity coordinates x = 0.330 y = 0.335, specifically designed and marketed for studio and video applications for traditional filmmaking LED or OLED light sources, complying with the N/A definition of 'original works of art' as defined in Directive 2001/84/EC of the European Parliament and of the Council, made by the artist him/herself in a limited number below 10 pieces white light sources which: N/A (w) are designed and marketed specifically for scene-N/A lighting use in film-studios, TV-studios and (1) locations, and photographic-studios and locations,







Requirement Clause Test Result Remark Verdict or for stage-lighting use in theatres, during concerts or other entertainment events And which: (2)provide two or more of the following specifications: N/A LED with high CRI > 90 (I) N/A GES/E40, K39d socket with changeable Colour N/A Temperature down to 1 800 K (undimmed), used (II)with low voltage power supply LED rated at 180W and greater and arranged to N/A (III)direct output to an area smaller than the light emitting surface DWE lamp type which is a tungsten lamp defined N/A by its wattage (650 W) voltage (120 V) and (IV) terminal type (pressure screw terminal) white bi-colour LED sources (V) N/A fluorescent tubes: Min BI Pin T5 and Bi Pin T12 N/A (VI) with CRI ≥ 85 and CCT 2900, 3000, 3200, 5600 or 6500 K. Information requirments according to point 3 (2)(e) of Annex II for products 3 specified in point 3 of Annex III For the light sources and separate control gears N/A specified in point 3 of Annex III the intended purpose shall be stated in the technical documentation for compliance assessment as per Article 5 of this Regulation and on all forms of packaging, product information and advertisement, together with an explicit indication that the light source or separate control gear is not intended for use in other applications The technical documentation file drawn up for the N/A purposes of conformity assessment, in accordance with Article 5 of this Regulation shall list the technical parameters that make the product design specific to qualify for the exemption In particular for light sources indicated in point 3(p) N/A of Annex III it shall be stated: 'This light source is only for use by photo sensitive patients. Use of this light source will lead to increased energy cost compared to an equivalent more energy efficient product.' 4 Circumvention (Article 7 of EU 2019/2020) N/A The manufacturer, importer or authorised N/A representative shall not place on the market products designed to be able to detect they are being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering their performance during the test with the aim of reaching a more



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favourable level for any of the parameters

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CSTesting	declared by the manufacturer, importer or authorised representative in the technical documentation or included in any of the documentation provided.	LCS Testing S.	N/A
	The energy consumption of the product and any of the other declared parameters shall not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to the update.		N/A













Tables

Appendix-Test Data Sheet

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1. Initial Lumen Measurement and Energy Efficiency:

Sample No.	Power Pon (W)	Disp. Factor	Luminous Flux Фtotal (lm)	Luminous Flux Фuse (lm)	Efficacy (Im/W)	Total mains efficacy ηTM (lm/W)	Beam angle (°)
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	esting N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Avg.	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Color Measurement:

Sample No.	Color Temp (CCT)	Color rendering (Ra)	R9	SDCM	Х	Υ
1	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A
10	CS Testi N/A	N/A	N/A	N/A	N/A	S Testi N/A
Avg.	N/A	N/A	N/A	N/A	N/A	N/A







Tables

3. Different Mode Power , Flicker, Stroboscopic Effect and Lumen Maintenance Test:

Sample No.	No-Load Power Pno	Standby Power Psb	Network Sb. Power Pnet	Flicker Pst LM	Stroboscopic Effect SVM	Total Luminous flux (Im) After 3600h	Lumen Maintenance at 3600h (%)	Survival factor at 3600h
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Avg.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A















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Tables

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Energy efficiency class	<u>es</u>						
Standard	Clau	ıse	Model No.	Verdict			
(EU) 2019/2015	Enei	rgy class	N/A				
Conditions	-aml	est conditions: ambition: <u>25</u> °C/ <u>65</u> %R.H. Fest voltage:					
Фuse	N/A						
Pon	N/A			ar 19	. on 147		
F _{TM}	N/A		立 识检测	ing Lab	检测版		
Total mains efficacy η _{TM} (lm/W)	N/A		ST LCS Tes	- 181 rce	705		
Technical requirements			Test result				
		Energy class	efficiency	Total mains efficacy η _{TM} (lm/W)			
$\eta_{TM} = (\Phi_{use}/P_{on}) \times F_{TM} (lm)$	/W).	A		210 ≤ η _™	N/A		
Todaya in Marka	88080000	В		185 ≤ η _{TM} < 210	N/A		
		С		160 ≤ η _™ < 185	N/A		
		D		135 ≤ η _™ < 160	N/A		
		TiH拉测器b		110 ≤ η _{тм} < 135	N/A		
	1/5/	LCSTe	F	85 ≤ η _™ < 110	N/A		
		G		η _{τм} < 85	N/A		
Factors FTM by light sou	rce typ	e					
Light source type				Factor F _{TM}			
Non-directional (NDLS) operating on mains (MLS)				1.000	N/A		
Non-directional (NDLS) not operating on mains (NMLS)			0.926	N/A			
Directional (DLS) operating on mains (MLS)			1.176	N/A			
Directional (DLS) not operating on mains (NMLS)				1.089	N/A		



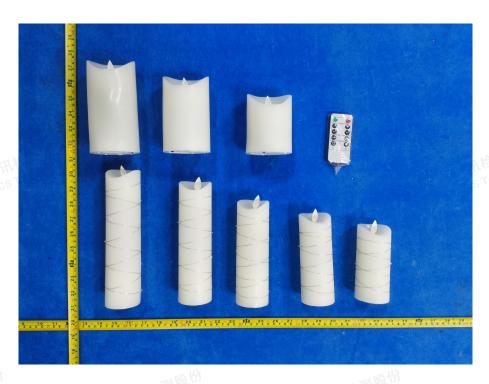
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Tables

ATTACHMENT 1(S)

Photos





---- End of test report---



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