

TEST REPORT

COMMISSION REGULATION (EU) 2019/2020

laying down eco-design requirements for light sources and separate control gears pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulations (EC) No 244/2009, (EC) No 245/2009 and (EU) No 1194/2012

COMMISSION DELEGATED REGULATION (EU) 2019/2015

supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of light sources and repealing Commission Delegated Regulation (EU) No 874/2012

Report Reference No.: XK2203012146S

Tested by (name + signature).....: Rachel Yang

Approved by (name + signature): Jean Shu

Reviewed By (+ signature): Andy Wang

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Total number of pages.....: 14 pages

Testing Laboratory.....: Shenzhen SiCT Technology Co., Ltd

Address.....: 202, Building 3, No.111, Huanguan Middle Road, Songyuanxia Community, Guanhu Street, Longhua District, Shenzhen, Guangdong, China

Applicant's name.....: TAIZHOU TAILI LIGHTING CO., LTD

Address.....: Unit 2, Building 11, Gaideg Pioneer Park, Dongcheng Town, Taizhou, Zhejiang, China

Manufacturer's name.....: TAIZHOU TAILI LIGHTING CO., LTD

Address.....: Unit 2, Building 11, Gaideg Pioneer Park, Dongcheng Town, Taizhou, Zhejiang, China

Test specification:

Standard.....: COMMISSION REGULATION (EU) No 2019/2020
COMMISSION DELEGATED REGULATION (EU) 2019/2015

Test procedure.....: Commission test

Non-standard test method.....: None

Test Report Form No.: EU 2019/2020_A

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

Master TRF.....: 2019-12-30

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Test item description.....: LED holiday light		
Trade Mark.....: N/A		
Factory.....: TAIZHOU TAILI LIGHTING CO., LTD		
Model/Type reference.....: DC, AX, BAT, BT, C, CL, D, W, WT, GJ, SD, SR, SCR, LX, TL, USB, GJ0103X, DMH201		
Ratings.....: AC220-240V, 50/60Hz, 6W		
Standard.....:		
Incandescent light bulbs	☐ EN 60054 ☐ CIE 84 ☐ L2/AP/005 ☐ CIE S 610	☐ CIE 15 ☐ CIE 63 ☐ IEC/TR 61341
Halogen incandescent light bulbs	☐ EN 60357 ☐ CIE 84 ☐ L2/AP/005 ☐ CIE S 610	☐ CIE 15 ☐ CIE 63 ☐ IEC/TR 61341
Compact fluorescent lamps with integrated control gear	☐ EN 60959 at present 34A/1701/CDV ☐ CIE 84 ☐ L2/AP/005 ☐ EN 61000-3-2	☐ CIE 15 ☐ CIE 13.3 ☐ CIE 63 ☐ IEC/TR 61341 ☐ EN 60968 at present 34A/1624/CD
High intensity discharge lamps	☐ EN 61167 ☐ CIE 84 ☐ L2/AP/005 ☐ EN 60962 ☐ EN 61000-3-2	☐ CIE 15 ☐ CIE 13.3 ☐ CIE 63 ☐ IEC/TR 61341
Light emitting diode lamps	☐ EN 62512 ☐ CIE 84 ☐ L2/AP/005 ☐ EN 61000-3-2	☐ prEN 13032-4 ☐ CIE 63 ☐ EN 62560
Light emitting diode modules	☒ IEC 62717 at present 34A/1659/CDV ☒ EN 61000-3-2 ☐ prEN 13032-4	☐ CIE 63 ☐ L2/AP/005
Lighting transformers (halogen and LED)	☐ IEC 62443-3, at present 34C/1019/CDV	
Fluorescent lamp controlgear	☐ EN 62442-1 replacing EN 50294	
High intensity discharge lamp controlgear	☐ IEC 62443-2, at present 34C/1016/CDV	

Summary of testing:

1. The samples were tested complies with the requirements of Annex II of COMMISSION REGULATION EU 2019/2020.
2. The light source belongs to **Class 0** according to COMMISSION REGULATION EU 2019/2015.
3. The parameters of the product information sheet for EU 2019/2015, please see attachment 1.
4. These tests were conducted by test lab that fulfils the requirements of standard ISO/IEC 17025.
5. When determining the test conclusion, the Measurement Uncertainty of test has been considered.
6. All test were carried out on the model DAH201.
7. All the models are with the same construction and materials. The differences are appearance and model name.
- 8.

Copy of marking plate

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Test item particulars _____ :	LED holiday light
Lamp cap _____ :	f
Bulb type _____ :	f
Lamp type _____ :	LED
Possible test case verdicts:	
- test case does not apply to the test object _____ : N/A	
- test object does meet the requirement _____ : P (Pass)	
- test object does not meet the requirement _____ : F (Fail)	
Testing _____ :	
Date of receipt of test item _____ :	Sep. 28, 2021
Date (s) of performance of tests _____ :	Sep. 28, 2021 to March 25, 2022
Test Ambient _____ :	Temperature: 25.0°C, Humidity: 71.5%
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory. "[see Enclosure #]" refers to additional information appended to the report. "[see appended table]" refers to a table appended to the report.	
General product information:	
1. The product covered by this report is a LED holiday light.	

EU 2019/2020			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX II	Ecodesign requirements		P
1	ENERGY EFFICIENCY REQUIREMENTS		P
(a)	Energy efficiency requirements for light source	See table 1	P
	The standby power P_{std} of a light source shall not exceed 0.5 W	See table 1	P
	The networked standby power P_{std} of a connected light source shall not exceed 0.5 W	See table 1	N/A
(b)	Minimum energy efficiency for separate control gear at full-load	See table 2	N/A
	The no-load power P_{no} of separate control gear shall not exceed 0.5 W	See table 2	N/A
	The standby power P_{std} of separate control gear shall not exceed 0.5 W	See table 2	N/A
	The networked standby power P_{std} of a connected separate control gear shall not exceed 0.5 W	See table 2	N/A
2	FUNCTIONALITY REQUIREMENTS		P
	Functionality requirements for light source	See table 1	P
3	PRODUCT INFORMATION REQUIREMENTS		--
(a)	Information to be displayed on the light source itself	See table 3	--
(b)	Information to be visibly displayed on the packaging		P
- (1)	Light source placed on the market, not in a containing product	See table 3	--
- (2)	Separate control gears	See table 4	N/A
(c)	Information to be visibly displayed on a free-access website of the manufacturer, importer or authorised representative		P
- (1)	Separate control gears	See table 4	N/A
(d)	Technical documentation		P
- (1)	Separate control gears		N/A
(e)	Information for products specified in point 3 of Annex III exemption		N/A
	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.		N/A
	The technical documentation file drawn up for the 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.		N/A
	In particular for light sources indicated in point 3(p) 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.'		N/A

EU 2019/2020			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX II	Energy efficiency classes and calculation method		P																
	$\eta_{TM} = (\Phi_{use}/P_{in}) \times F_{TM} \text{ (lm/W)}$	55.83	P																
	Tested Φ_{use} :	335.0lm	P																
	Tested P_{in} :	6.0W	P																
	Factors F_{TM} by light source type	1.000	P																
	<table> <tr> <th>Light source type</th> <th>Factor F_{TM}</th> </tr> <tr> <td>New directional (NDL-E) operating in mode (ML-E)</td> <td>1.000</td> </tr> <tr> <td>New directional (NDL-E) not operating in mode (NDL-E)</td> <td>0.900</td> </tr> <tr> <td>Downward (DL-E) operating in mode (ML-E)</td> <td>1.070</td> </tr> <tr> <td>Downward (DL-E) not operating in mode (DM-E)</td> <td>1.000</td> </tr> </table>	Light source type	Factor F_{TM}	New directional (NDL-E) operating in mode (ML-E)	1.000	New directional (NDL-E) not operating in mode (NDL-E)	0.900	Downward (DL-E) operating in mode (ML-E)	1.070	Downward (DL-E) not operating in mode (DM-E)	1.000								
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	Energy efficiency classes of light sources	G	P																
	<table> <tr> <th>Energy efficiency class</th> <th>Total system efficacy η_{TM} (lm/W)</th> </tr> <tr> <td>A</td> <td>$220 \leq \eta_{TM}$</td> </tr> <tr> <td>B</td> <td>$185 \leq \eta_{TM} < 220$</td> </tr> <tr> <td>C</td> <td>$160 \leq \eta_{TM} < 185$</td> </tr> <tr> <td>D</td> <td>$135 \leq \eta_{TM} < 160$</td> </tr> <tr> <td>E</td> <td>$110 \leq \eta_{TM} < 135$</td> </tr> <tr> <td>F</td> <td>$85 \leq \eta_{TM} < 110$</td> </tr> <tr> <td>G</td> <td>$\eta_{TM} < 85$</td> </tr> </table>	Energy efficiency class	Total system efficacy η_{TM} (lm/W)	A	$220 \leq \eta_{TM}$	B	$185 \leq \eta_{TM} < 220$	C	$160 \leq \eta_{TM} < 185$	D	$135 \leq \eta_{TM} < 160$	E	$110 \leq \eta_{TM} < 135$	F	$85 \leq \eta_{TM} < 110$	G	$\eta_{TM} < 85$		
Energy efficiency class	Total system efficacy η_{TM} (lm/W)																		
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B	$185 \leq \eta_{TM} < 220$																		
C	$160 \leq \eta_{TM} < 185$																		
D	$135 \leq \eta_{TM} < 160$																		
E	$110 \leq \eta_{TM} < 135$																		
F	$85 \leq \eta_{TM} < 110$																		
G	$\eta_{TM} < 85$																		

EU 2019/2020								
Clause	Requirement + Test					Result - Remark		Verdict
Table 1 - Energy efficiency requirements & Functionality requirements for light source								
Type :	DAH201					Test voltage (V): AC230V (NDLS&MLS)		
Energy efficiency Calculation for rated value	$P_{onmax} = C \times (L + \Phi_{use} / (P \times \eta)) \times R = 7.88$					$\geq P_{on} : 6.0W$		
	C: 1.15	L: 1.5		P: 1.0		$\eta: 65.0$	R: 1.03	$\Phi_{use} : 335.0lm$
Other parameter (measured)	R9: 13.9			CCT: 2700K		Beam angle: Non-directional		
Sample	No.1	No.2	No.3	No.4	No.5	Average / results:	Limit	Verdict
	No.6	No.7	No.8	No.9	No.10			
Φ_{use} (lm)	334.6	334.8	335.1	334.9	335.2	335.0	-10%	P
	334.9	334.8	335.3	335.2	335.1			
P_{on} (W)	6.01	6.03	6.02	5.99	6.02	6.0	☐ $P \leq 2\text{ W} : +0.2\text{ W}$ ☐ $2\text{ W} < P \leq 5\text{ W} : +10\%$ ☒ $5\text{ W} < P \leq 100\text{ W} : +5\%$ ☐ $P > 100\text{ W} : +2.5\%$	P
	6.01	5.96	5.98	6.01	5.97			
DF	/	/	/	/	/	/	☐ $P \leq 5\text{ W} : \text{no requirement}$ ☐ $5\text{ W} < P \leq 10\text{ W} : DF > 0.5$ ☒ $10\text{ W} < P \leq 25\text{ W} : DF > 0.7$ ☐ $P > 25\text{ W} : DF > 0.9$	N/A
	/	/	/	/	/			
P_{onmax} (W)	/	/	/	/	/	7.88	$P_{onmax} \geq P_{on}$	P
	/	/	/	/	/			
Lamp survival factor	1.0	1.0	1.0	1.0	1.0	1.0	≥ 0.9	P
	1.0	1.0	1.0	1.0	1.0			
Lumen Maintenance	97.5%	97.6%	96.7%	97.6%	97.6%	97.3%	$X_{LM50\%} = 100 - \frac{(1000 - 340.7)}{L_{70}}$ $X_{LM50\%} \geq 96.0\%$	P
	97.4%	97.1%	97.4%	96.90 %	97.2%			
CRi	90.9	90.4	90.6	90.3	90.3	90.6	☒ ≥ 80 ☐ except for HID with $\Phi_{use} > 4\text{ km}$ and for light sources intended for use in	P

EU 2019/2020								
Clause	Requirement + Test					Result - Remark		Verdict
	90.6	90.7	90.3	90.6	90.6		outdoor applications, industrial applications or other applications where lighting standards allow a CRI < 80	
P _{tot} (W)	/	/	/	/	/	N/A	≤ 0.5W	N/A
	/	/	/	/	/			
P _{tot} (W)	/	/	/	/	/	/	≤ 0.5W	N/A
	/	/	/	/	/			
Colour consistency	3.87	3.98	4.12	4.02	4.21	4.05	6.0	P
	4.15	4.01	3.99	3.98	4.15			
Pst LM	/	/	/	/	/	/	≤ 1.0	N/A
	/	/	/	/	/			
SYM	/	/	/	/	/	/	☒ ≤ 0.4 ☐ except for HID with Φ _{use} > 4 km and for light sources intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a CRI < 80	N/A
	/	/	/	/	/			

EU 2019/2020

Clause	Requirement + Test	Result - Remark	Verdict
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Table 2 - Energy Efficiency Requirements for separate control gear

Functionality parameter Sample	Energy efficiency at full-load	P_{in} (W)	P_{out} (W)	P_{net} (W)
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
Limit	$P_{in}^{LFL} / (1.09 \times P_{in}^{LFL} + 2.10) \geq 73.0\%$	0.5	0.5	0.5
Verdict	—	—	—	—

EU 2019/2020

Clause	Requirement + Test	Result - Remark	Verdict
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Table 3 – Information for light sources

1. Information to be displayed on the light source itself			
Useful luminous flux (lm)		335.0	
Correlated colour temperature (K)		2700	
Beam angle (°) , For directional light sources		N/A	
2. Information to be visibly displayed on the packaging			
Useful luminous flux (lm) in a font at least twice as large as the display of the on-mode power (P _{on}), clearly indicating if it refers to the flux in a sphere (360°), in a wide cone (120°) or in a narrow cone (90°)		335.0	
Correlated colour temperature (K)		2700	
Beam angle (°) , For directional light sources:		N/A	
Rated voltage and frequency:		AC230V	
Lamp cap:		N/A	
L _{90/B₁₀} lifetime:		15000h	
P _{in} (W):		6.0W	
Standby power (P _{stb}):		N/A	
Networked standby power (P _{net}) for CLS		N/A	
CRI:		90	
if CRI< 80, and the light source is intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a CRI< 80, a clear indication to this effect. For HID light sources with useful luminous flux > 4 000 lm, this indication is not mandatory		N/A	
Non-standard conditions (such as ambient temperature T _a ≠ 25 °C or specific thermal management is necessary): information on those conditions		N/A	
Dimmed or can be dimmed only with specific dimmers or with specific wired or wireless dimming methods		N/A	
Contains mercury: a warning of this, including the mercury content in mg rounded to the first decimal place		N/A	
A warning that it shall not be disposed of as unsorted municipal waste		P	

EU 2019/2020

Clause	Requirement + Test	Result - Remark	Verdict
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Table 4 – Information for separate control gear

1. Information to be visibly displayed on the packaging	
Maximum output power (W):	---
Type of light source(s) for which it is intended:	---
Efficiency in full-load (%):	---
No-load power P_{no} (W):	---
Standby power P_{stb} (W):	---
Networked standby power P_{nwb} (W):	---
A warning if the control gear is not suitable for dimming of light sources or can be used only with specific types of dimmable light sources or using specific wired or wireless dimming methods. In the latter cases, detailed information on the conditions in which the control gear can be used for dimming shall be provided on the manufacturer's or importer's website	---
A QR-code redirecting to a free-access website	---
2. Information to be visibly displayed on free-access website	
Information specified in above	---
Outer dimensions (mm)	---
Mass (g)	---
Instructions on how to remove, how to switch on/off, how to minimise their power consumption	---
If the control gear can be used with dimmable light sources, a list of minimum characteristics that the light sources should have to be fully compatible with the control gear during dimming, and possibly a list of compatible dimmable light sources:	---
Recommendations on how to dispose of it at the end of its life in line with Directive 2012/19/EU	---

Attachment 1 – Product information sheet for EU 2019/2015

Product information sheet
For light source (including it is a part in a containing product)

Supplier's name or trade mark: TAIZHOU TAILI LIGHTING CO., LTD

Supplier's address:

Unit 2, Building 11, Caideg Pioneer Park, Dongcheng Town, Taizhou, Zhejiang, China

Model identifier: GJG150X

Type of light source:

Lighting technology used:	[LED]	Non-directional or directional:	[NOL5]
Mains or non-mains:	[MLS]	Connected light source (CLS):	[no]
Colour-tunable light source:	[no]	Envelope:	[no]
High luminance light source:	[no]		
Anti-glare shield:	[no]	Dimmable:	[yes]

Product parameters

Parameters	Value	Parameters	Value
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General product parameters:

Energy consumption in on-mode (kWh/1 000 h)	6	Energy efficiency class	[G]
Useful luminous flux (Φ_{use}), indicating if it refers to the flux in a sphere (360°), in a wide cone (120°) or in a narrow cone (60°)	335 in [360°]	Correlated colour temperature, rounded to the nearest 100 K, or the range of correlated colour temperatures, rounded to the nearest 100 K, that can be set	[2700K]
On-mode power (P_{on}), expressed in W	6.0	Standby power (P_{sb}), expressed in W and rounded to the second decimal	N/A
Networked standby power (P_{nw}) for CLS, expressed in W and rounded to the second decimal	N/A	Colour rendering index, rounded to the nearest integer, or the range of CRI-values that can be set	[90]
Outer dimensions without separate control gear, lighting control parts and non-lighting control parts, if any (millimetre)	Height	150	Spectral power distribution in the range 250 nm to 800 nm, at full-load [see next page]
	Width	150	
	Depth	10	
Claim of equivalent power	[-]	If yes, equivalent power (W)	N/A
		Chromaticity coordinates (x and y)	0.417 0.428

Attachment 1 – Product information sheet for EU 2019/2015

Parameters for directional light sources:

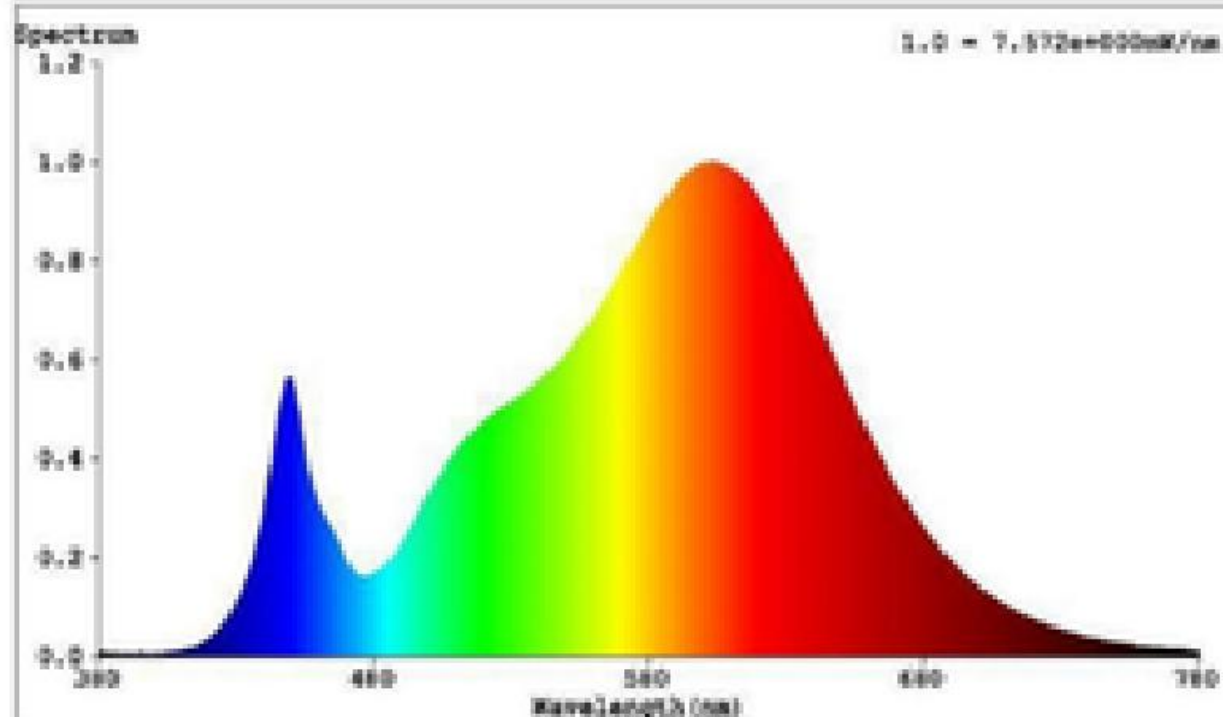
Peak luminous intensity (cd)	103	Beam angle in degrees, or the range of beam angles that can be set	[N/A]
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Parameters for LED and OLED light sources:

R9 colour rendering index value	13.9	Survival factor	0.9
the lumen maintenance factor	0.97		

Parameters for LED and OLED mains light sources:

Displacement factor (cos ϕ)	0.46	Colour consistency in MacAdam ellipses	<5
Claims that an LED light source replaces a fluorescent light source without integrated ballast of a particular wattage	[]	If yes then replacement claim (W)	N/A
Flicker metric (P _{st} LM)	N/A	Stroboscopic effect metric (SVM)	N/A



Attachment 2 - Photo documentation

Photo 1

... End of Report ...