

## APPLICATION FOR TEST REPORT

### On Behalf of

**Report Reference No.** : XKE240611078NJR

**Prepared For** : Shenzhen Shengbai Industry Co. , Ltd.  
Building 505, building A, 70-1 Changjiang Pu Road, Heao

**Address** : Community, Yuanshan Street, Longgang District, Shenzhen City,  
China

**Sample Name** : Floor lamp

**Model** : BYD-01

**Trademark** : N/A

**Prepared By** : Shenzhen xke Testing Technology Co., Ltd.

**Address** : 1/F, Building 4, Zhaofuda Industrial Park, Hongqiaotou , Yanluo  
Street, Bao 'an District, Shenzhen,China

**Date of Receipt** : November.16 , 2023

**Date of Test** : November.16 , 2023 to June.11 , 2024

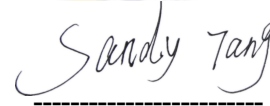
**Data of Issue** : June.11 , 2024

***Note:** This test report is limited to the above client company and the product model only.  
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**TEST REPORT**

Report Number..... : XKE240611078NJR

Compileb by (name+signature)..... : Sandy Tang



Approved by (name+signature)..... : Tomi Liu



Dare of issue..... : June.10 , 2024

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

Address..... : 1/F, Building 4, Zhaofuda Industrial Park, Hongqiaotou , Yanluo Street, Bao 'an District, Shenzhen,China

Applicant's name..... : Shenzhen Shengbai Industry Co. , Ltd.

Address..... : Building 505, building A, 70-1 Changjiang Pu Road, Heao Community, Yuanshan Street, Longgang District, Shenzhen City, China

**Test specification:**

- Standard..... :
- CIE 13.3:1995;
  - CIE 97:2005;
  - CIE 127:2007;
  - EU 2019/2020;
  - EU 2015/1428;
  - CIE 18.2:1983;
  - CIE 15:2004;
  - CIE 84:1989;
  - IEC62612: 2013+A1
  - EU 2019/2015

Test Procedure..... : COMMISSION REGULATION (EU) 2019/2020 of 1 October 2019 laying down ecodesign requirements for light sources and separate controlgears 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

Master TRF..... : 2022- 11-04

Test Item description..... : Floor lamp

Trade Mark..... : N/A

Manufacturer..... : Shenzhen Shengbai Industry Co. , Ltd.

Address..... : Building 505, building A, 70-1 Changjiang Pu Road, Heao Community, Yuanshan Street, Longgang District, Shenzhen City, China

Model/Type reference..... : BYD-01

Serial Model..... : ML-G07,ML-G06,ML-G05,ML-G04,ML-G03,ML-G02,ML-G01

Rating..... : Input DC5.0V 1A from adapter or others

**Test item particulars:**

Model name..... : BYD-01

Lighting type ..... :  directional  non-directional

Rated voltage and frequency..... : DC5.0V, 5W

Rated wattage..... : 5W

Energy efficiency class..... : A B C D E F G

Energy consumption in on-mode (kWh/1000h)..... : 5

Lamp cap ..... : N/A

Nominal luminous flux  $\Phi$ ..... : 1025lm

Useful luminous flux ( $\Phi_{use}$ )..... : 1025lm

Declared  $\eta_{TM}$  (lm/W)..... : 205lm/W

Declared Colour rendering (CRI)..... : 90

Declared Displacement factor for LED and OLE  
MLS(DF) ..... : 0.99

Declared Lumen maintenance factor for LED  
and OLE..... : 96%

Declared Survival factor for LED and OLED..... : 99%

Declared colour consistency for LED and OLED..... : 1.5

Declared beam angle for DLS ..... : 360

Declared lamp life..... : 36000h

Declared color temperature..... : 6500K

Declared Flicker for LED and OLED MLS..... : 0.3

Declared Stroboscopic effect for LED  
And OLED MLS..... : 0.2

**Test case verdicts:**

Test case does not apply to the test object..... : N(A)

Test item does meet the requirement..... : P(ass)

Test item does not meet the requirement ..... : F(ail)

**Testing:**

Date of receipt of test item..... : November.16 , 2023

Date(s) of performance of test..... : November.16 , 2023 to June.11 , 2024

**Summary of testing:**

- 1、 These results are in compliance with the ecodesign requirements of the Commission Regulation (EU) 2019/2020.
- 2、 Measurement was conducted at voltage 5VDC and a stable ambient temperature  $25\pm 10^{\circ}\text{C}$ .
- 3、 THDu  $\leq 3\%$

**General remarks**

"(see remark #)" refers to a remark appended to the report.  
"(see appended table)" refers to a table appended to the report.  
Throughout this report a comma is used as the decimal separator.  
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 testing laboratory.

**Copy of marking plate:**

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Floor lamp  
Model: BYD-01      Lumen: 1025lm  
Power: 5W  
Shenzhen Shengbai Industry Co. , Ltd.

**Importer:** XXXX  
Address: XXXX  
Made in China



(EU) 2019/2020			
Clause	Requirement – Test	Result - Remark	Verdict
<b>Annex I</b>	<b>Definitions in Regulation (EU) 2019/2020</b>		P
1	Number of sample used for test .....	10 PCS	P
(3)	Directional Light Source		N
	at least 80 % of total luminous flux within a solid angle of $\pi$ sr (corresponding to a cone with angle of $120^\circ$ )		N
(15)	Useful luminous flux $\Phi_{use}$		P
	for non-directional light sources it is the total flux emitted in a solid angle of $4\pi$ sr (corresponding to a $360^\circ$ sphere)		P
	for directional light sources with beam angle $\geq 90^\circ$ it is the flux emitted in a solid angle of $\pi$ sr (corresponding to a cone with angle of $120^\circ$ )		N
	for directional light sources with beam angle $< 90^\circ$ it is the flux emitted in a solid angle of $0,586\pi$ sr (corresponding to a cone with angle of $90^\circ$ )		N
<b>Annex II (Clause)</b>	<b>Energy Efficiency Requirements in Regulation (EU) 2019/2020</b>		P
1.(a)	<b>Energy Efficiency Requirements – Light Source</b>		P
	On-mode Power $P_{on}$ (W):	$P_{on}=5W$	P
	Maximum Allowed Power $P_{onmax}$ (W): $P_{onmax} = C \times (L + \Phi_{use}/(F \times \eta)) \times R$	$P_{onmax}=7.93W$	P
	$\Phi_{use}$ :	1025lm	
	Threshold efficacy $\eta$ (lm/W): $\eta$ for LED:	205	P
	End loss factor L (W) depending on light source: L for LED: 1.5	1.5	P
	End loss factor L (W) for connected light sources: 2.0		
	Efficacy Factor F: 1.00 for non-directional light sources (NDLS, using total flux)	1.00	P

	Efficacy Factor F: 0.85 for directional light sources (DLS, using flux in a cone)		N
	CRI Factor R: 0.65 for CRI ≤ 25		N
	CRI Factor R: (CRI+80)/160 for CRI > 25, rounded to two decimals	R=(80+90)/160	P
	Correction Factor C Depending on Light Source Characteristics in Table 2		N
	Non-directional (NDLS) not operating on mains (NMLS), Basic Value: 1.00	1.00	P
	Non-directional (NDLS) operating on mains (MLS), Basic Value: 1.08		N
	Directional (DLS) not operating on mains (NMLS), Basic Value: 1.15		N
	Directional (DLS) operating on mains (MLS), Basic Value: 1.23		N
	Special Light Source Bonus on C		N
<b>1.(a)</b>	<b>Standby power–Light Source</b>		N
	The standby power $P_{sb}$ of a light source shall not exceed 0.5 W		N
	The networked standby power $P_{net}$ of a connected light source shall not exceed 0.5 W		N
	The allowable values for $P_{sb}$ and $P_{net}$ shall not be added together		N
<b>1.(b)</b>	<b>Energy Efficiency Requirements–Separate Control Gear (atfull-load)</b>		N
	Control gear for LED or OLED light sources: $P_{eg}^{0.81} / (1.09 \times P_{eg}^{0.81} + 2.10)$		N
	The no-load power $P_{no}$ of a separate control gear shall not exceed 0.5 W		N
	The standby power $P_{sb}$ of a separate control gear shall not exceed 0.5 W		N
	The networked standby power $P_{net}$ of a connected separate control gear shall not exceed 0.5 W		N

	The allowable values for P <sub>sb</sub> and P <sub>net</sub> shall not be added together		N
<b>2.</b>	<b>Functional Requirements–Light Source (Table 4)</b>		P
	Colour Rendering Index CRI: ≥80	90	P
	Displacement Factor DF at Power Input P <sub>on</sub> for LED and OLED MLS:		P
	No limit at P <sub>on</sub> ≤ 5W DF ≥ 0.5 at 5W < P <sub>on</sub> ≤ 10W, DF ≥ 0.7 at 10W < P <sub>on</sub> ≤ 25W DF ≥ 0.9 at 25W < P <sub>on</sub>	P <sub>on</sub> = 5W	P
	Lumen Maintenance Factor (for LED and OLED): $X_{LMF,MIN}\% = 100 \times e^{-\frac{(3000 \times \ln(0.7))}{L_{70}}}$	99%	P
	Survival Factor (for LED and OLED): At least 9 light sources of the test sample must be operational after completing the test in Annex V of this Regulation.	100%	P
	Colour consistency for LED and OLED light sources: Variation of chromaticity coordinates within a six-step MacAdam ellipse or less.	1.5	P
	Flicker for LED and OLED MLS: P <sub>st</sub> LM ≤ 1.0 at full-load	0.000	P
	Stroboscopic effect for LED and OLED MLS: SVM ≤ 0.9 at full-load	0.000	P
<b>3.(a)</b>	<b>Information to be displayed on the light source itself</b>		P
	Useful luminous flux (lm)	1025lm	P
	Correlated colour temperature (K)	6500K	P
	Beam angle (°) For directional light sources		N
<b>3.(b)</b>	<b>Information to be visibly displayed on the packaging</b>		P
<b>3.(b)(1)</b>	<b>Light source placed on the market, not in a containing product</b>		P

	<p>Useful luminous flux (lm):</p> <ul style="list-style-type: none"> <li>-In a font at least twice as large as the display of the on-mode power (Pon)</li> <li>-Clearly indicating if it refers to the flux in a sphere(360°),in a wide cone(120°) or in a narrow cone(90°)</li> </ul>		P
	(b) Correlated Colour Temperature, rounded to the nearest 100 K		P
	(c) Beam angle in degrees For directional light sources		N
	(d) electrical interface details, e.g. cap- or connector-type, type of power supply (e.g. 230 V AC 50 Hz, 12 V DC)	5VDC	P
	(e) L70B50 lifetime for LED and OLED light sources, expressed in hours		P
	(f) on-mode power (Pon), expressed in W		P
	(g) standby power (Psb), expressed in W and rounded to the second decimal. If the value is zero, it may be omitted from the packaging		N
	(h) networked standby power (Pnet) for CLS, expressed in W and rounded to the second decimal. If the value is zero, it may be omitted from the packaging		N
	(i) Colour Rendering Index, rounded to the nearest integer		P
	(j) Clear indication to this effect, 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.		N
	(k) Information on non-standard conditions (such as ambient temperature $T_a \neq 25\text{ }^\circ\text{C}$ or specific thermal management is necessary)		N
	(l) a warning if the light source cannot be dimmed or can be dimmed only with specific dimmers or with specific wired or wireless dimming methods. In the latter cases a list of compatible dimmers and/or methods shall be provided on the manufacturer's website		P
	(m) if the light source contains mercury: a warning of this, including the mercury content in mg rounded to the first decimal place		P



	(n) if the light source is within the scope of Directive 2012/19/EU, without prejudice to marking obligations pursuant to Article 14(4) of Directive 2012/19/EU, or contains mercury: a warning that it shall not be disposed of as unsorted municipal waste	P
3.(b)(2)	<b>Separate control gears</b> For separate control gear placed on the market as a stand-alone product, not as a part of a containing product	N
	(a) the maximum output power of the control gear (for HL, LED and OLED) or the power of the light source for which the control gear is intended (for FL and HID)	N
	(b) the type of light source(s) for which it is intended	N
	(c) the efficiency in full-load, expressed in percentage	N
	(d) the no-load power (Pno), expressed in W and rounded to the second decimal, or the indication that the gear is not intended to operate in no-load mode. If the value is zero, it may be omitted from the packaging but shall nonetheless be declared in the technical documentation and on websites	N
	(e) the standby power (Psb), expressed in W and rounded to the second decimal. If the value is zero, it may be omitted from the packaging but shall nonetheless be declared in	N
	(f) the networked standby power (Pnet), expressed in W and rounded to the second decimal. If the value is zero, it may be omitted from the packaging but shall nonetheless be declared in the technical documentation and on websites	N
	(g) 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	N

	(h) a QR-code redirecting to a free-access website of the manufacturer, importer or authorised representative, or the internet address for such a website, where full information on the control gear can be found		N
3.(c)	<b>Information to be visibly displayed on a free-access website of the manufacturer, importer or authorised representative</b>		N
3.(c)(1)	Separate control gears For any separate control gear that is placed on the EU market, the following information shall be displayed on at least one free-access website:		N
	(a) the information specified in point 3(b)(2), except 3(b)(2)(h)		N
	(b) the outer dimensions in mm		N
	(c) the mass in grams of the control gear, without packaging, and without lighting control parts and non-lighting parts, if any and if they can be physically separated from the control gear		N
	(d) instructions on how to remove lighting control parts and non-lighting parts, if any, or how to switch them off or minimise their power consumption during control-gear testing for market surveillance purposes		N
	(e) 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		N
	(f) recommendations on how to dispose of it at		

Appendix tables

1. Initial Lumen Measurement and Color Performance:

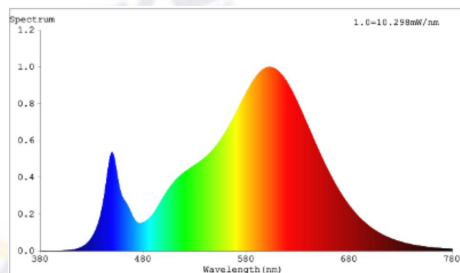
Sample No.	Power Pon (W)	Disp. Factor	Luminous Flux Φtotal (lm)	Efficacy (lm/W)	Color Temp (CCT)	Color rendering (Ra)	R9	SDCM	x	y
1	5.10	0.99	1025.26	201.03	6501	90.3	5	1.3	0.4182	0.4028
2	5.02	0.99	1025.14	204.21	6498	90.1	6	1.2	0.4113	0.4105
3	5.05	0.99	1024.35	202.84	6506	90.1	5	1.3	0.4325	0.4113
4	4.94	0.99	1024.67	207.42	6503	90.6	5	1.3	0.4123	0.4137
5	5.06	0.99	1024.66	202.50	6499	90.8	5	1.4	0.4125	0.3999
6	4.91	0.99	1023.20	208.39	6496	90.3	5	1.3	0.4256	0.4083
7	5.02	0.99	1023.55	203.89	6512	90.8	6	1.3	0.4149	0.3969
8	4.93	0.99	1023.89	207.68	6493	90.9	6	1.3	0.4312	0.3988
9	5.05	0.99	1024.93	202.95	6509	90.6	5	1.4	0.4157	0.3966
10	4.87	0.99	1024.05	210.27	6511	90.8	5	1.3	0.4187	0.4088
AVG.	4.99	0.99	1024.37	205.11	6502	90.5	5	1.3	0.4192	0.4076

2. 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 (lm) After 3600h	Lumen Maintenance at 3600h (%)	Survival factor at 3600h
1	N/A	N/A	N/A	0.3	0.2	987.07	96.30%	No damage
2	N/A	N/A	N/A	0.3	0.2	990.15	96.60%	No damage
3	N/A	N/A	N/A	0.3	0.2	985.33	96.13%	No damage
4	N/A	N/A	N/A	0.3	0.2	995.78	97.15%	No damage
5	N/A	N/A	N/A	0.3	0.2	982.87	95.89%	No damage
6	N/A	N/A	N/A	0.3	0.2	976.10	95.23%	No damage
7	N/A	N/A	N/A	0.3	0.2	995.48	97.12%	No damage
8	N/A	N/A	N/A	0.3	0.2	993.02	96.88%	No damage
9	N/A	N/A	N/A	0.3	0.2	997.63	97.33%	No damage
10	N/A	N/A	N/A	0.3	0.2	991.17	96.70%	No damage
AVG.	N/A	N/A	N/A	0.3	0.2	989.46	96.53%	100%
Required	/	/	/	Pst LM ≤ 1.0	SVM ≤ 0.4	/	≥ 96%	≥ 90%

Energy efficiency classes			
Standard	Clause	Model No.	Verdict
(EU) 2019/2015	Energy class	BYD-01	P
Conditions	-Test conditions: -ambient: 25°C/65%R.H. -Test voltage: 5VDC		
$\Phi_{use}$	1025.lm (Declared)		
$P_{on}$	$P_{on} = 5W$ (Declared)		
$F_{TM}$	0.926		
$\eta_{TM}$	190lm/w (Declared)		
Technical requirements	Test result		
$\eta_{TM} = (\Phi_{use}/P_{on}) \times F_{TM}$ (lm/W).	Energy efficiency class	Total mains efficacy $\eta_{TM}$ (lm/W)	--
	A	$210 \leq \eta_{TM}$	N
	B	$185 \leq \eta_{TM} < 210$	P
	C	$160 \leq \eta_{TM} < 185$	N
	D	$135 \leq \eta_{TM} < 160$	N
	E	$110 \leq \eta_{TM} < 135$	N
	F	$85 \leq \eta_{TM} < 110$	N
	G	$\eta_{TM} < 85$	N
Factors FTM by light source type			
Light source type	Factor FTM		--
Non-directional (NDLS) operating on mains (MLS)	1.000		N
Non-directional (NDLS) not operating on mains (NMLS)	0.926		P
Directional (DLS) operating on mains (MLS)	1.176		N
Directional (DLS) not operating on mains (NMLS)	1.089		N

ATTACHMENT 2



**Sample Photo:**

Photo 1

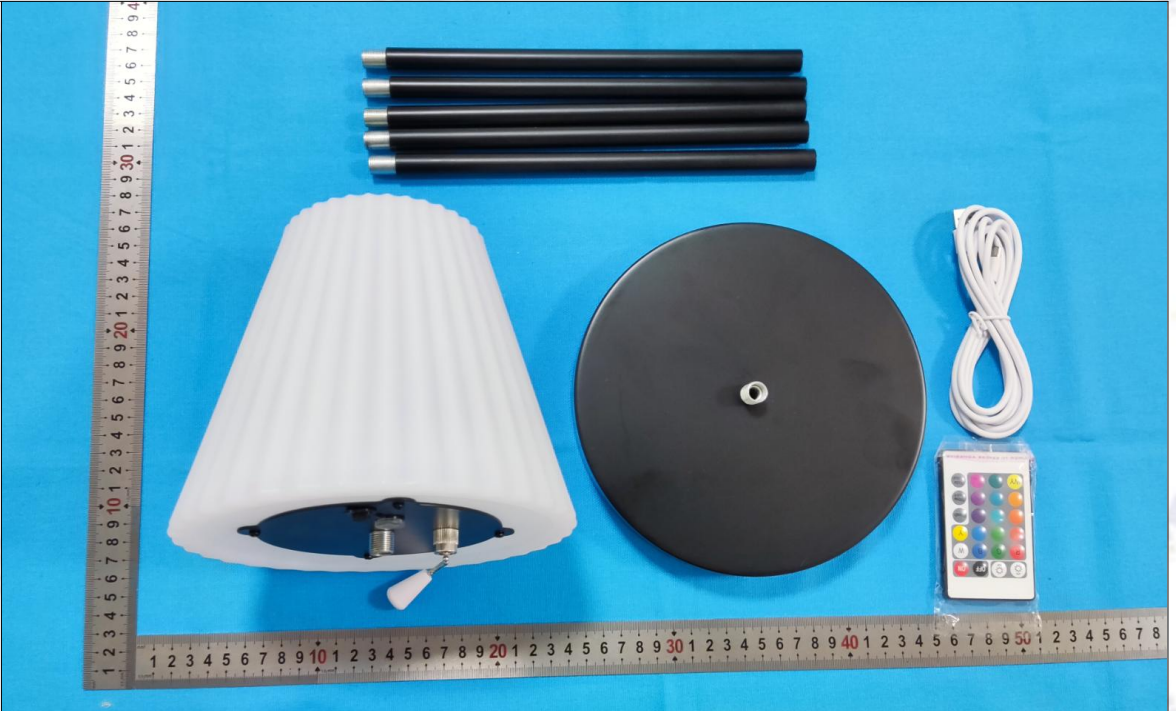
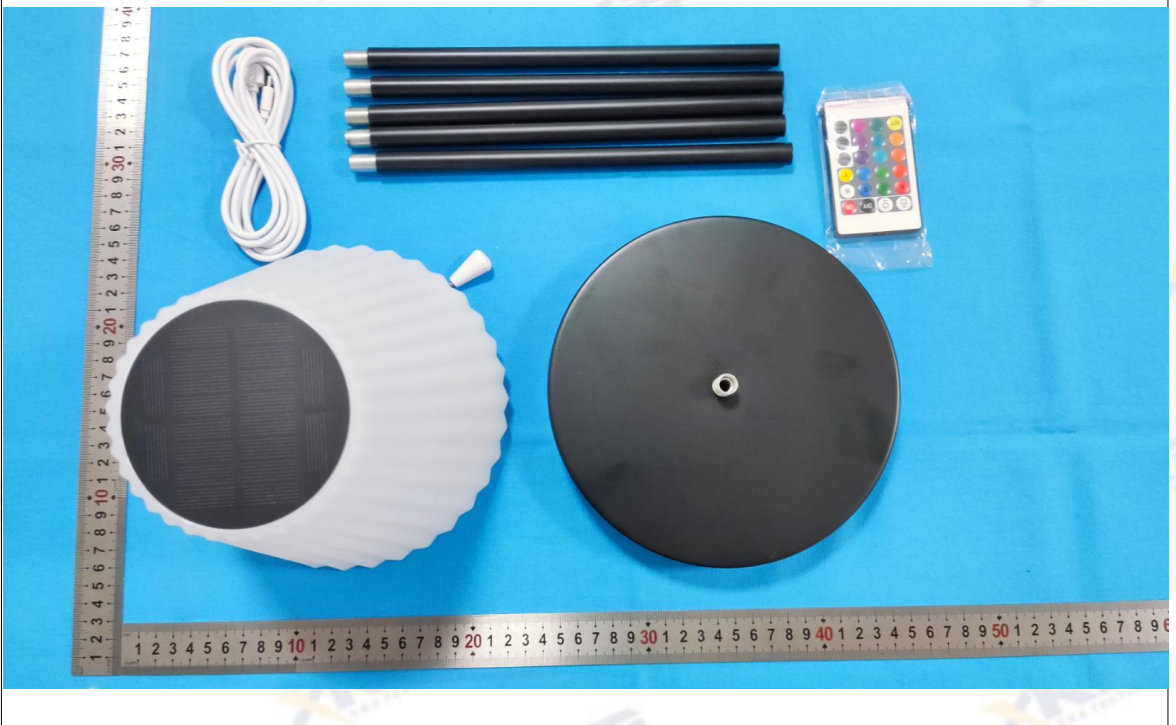


Photo 2



\*\*\*\*\* END OF THE REPORT \*\*\*\*\*