

TEST REPORT

Product Name : LED table lamp
Model Number : See model list

Prepared for Address : Power beauty (Dong guan) Industrial Co., Ltd.
: N o.1, Eastern Industry Park, Shujiu Village, Changping
Town, Dongguan City, China

Prepared by Address : EMTEK (DONGGUAN) CO., LTD.
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Report Number : EDG2111250062L00301RM1
Date(s) of Tests : July 01, 2021 to December 05, 2021
Date of issue : March 24, 2022

TEST REPORT

COMMISSION REGULATION (EU) 2019/2020

Directive 2009/125/EC of the European Parliament and of the Council

Report Reference No.....: EDG2111250062L00301RM1

Compiled by.....: Tim Zhou

Approved by.....: June Luo

Date of issue.....: March 24, 2022

Contents: 14 pages



Testing laboratory

Name.....: EMTEK(DONGGUAN) CO., LTD.

Address: -1&2F., Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No. 9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China

Testing location.....: Same as above

Client

Applicant name: Power beauty (Dong guan) Industrial Co., Ltd.

Address: N o.1, Eastern Industry Park, Shujiu Village, Changping Town, Dongguan City, China

Manufacturer name.....: Power beauty (Dong guan) Industrial Co., Ltd.

Address: N o.1, Eastern Industry Park, Shujiu Village, Changping Town, Dongguan City, China

Factory name: Power beauty (Dong guan) Industrial Co., Ltd.

Address: N o.1, Eastern Industry Park, Shujiu Village, Changping Town, Dongguan City, China

Test specification :

Test procedure.....: EU 2019/2020
EU 2019/2015
EU2021/341
EU2021/340

Test standard: See Page 5

Test item description.....: Ecodesign Directive

Product name: LED table lamp

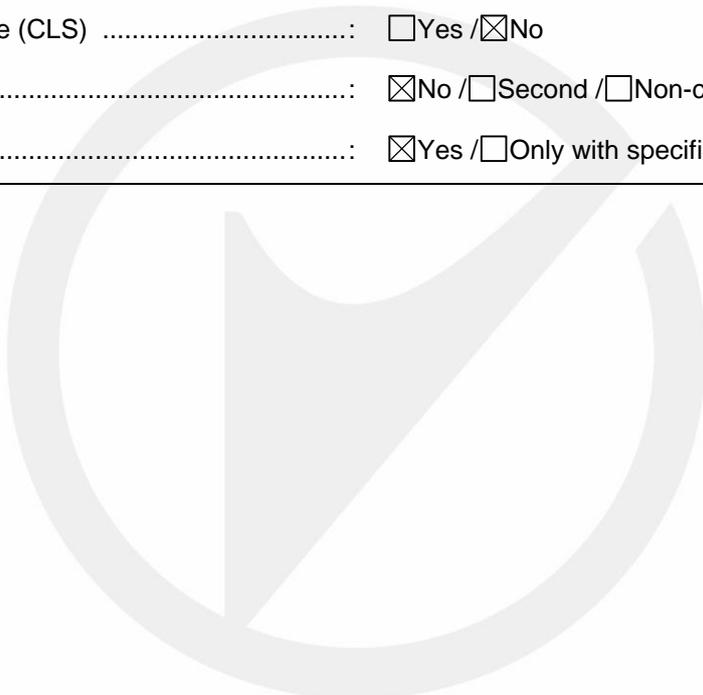
Trade Mark.....: N/A

Model/Type reference.....: See model list

Ratings: DC4.2V

General information:

- Lighting technology used.....: HL/LFL T5 HE/LFLT5 HO/CFLni/
otherFL/HPS/MH/otherHID/
LED/OLED/mixed/other
- Mains or non-mains.....: MLS/NMLS
- Colour-tuneable light source.....: Yes /No
- High luminance light source.....: Yes /No
- Anti-glare shield.....: Yes /No
- Use of Luminaries.....: Indoor/Outdoor/Industry
- Directionality.....: NDLS /DLS
- Connected light source (CLS).....: Yes /No
- Envelope.....: No /Second /Non-clear
- Dimmable.....: Yes /Only with specific dimmers /No



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.....: July 01, 2021

Date (s) of performance of tests.....: July 01, 2021 to December 05, 2021

General remarks:

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
 The test results presented in this report relate only to the object tested.
 "(See appended table)" refers to a table appended to the report.
 Throughout this report a comma/ point is used as the decimal separator.

General product information:

1.model list:

PBG-1238, PBG-1115A, PBG-1115B, PBG-1115C, PBG-2031, PBG-1726A, PBG-1726B, PBG-1626-1, PBG-20210525-003, PBG-1625, PBG-1825, PBG-1225, PBG-250, PBG-2817, PBG-2728, PBG-2123, PBG-1220-3, PBG-1222, PBG-20210525-001, PBG-20210525-002, PBB-1220-1, PBB-1626-1, PBB-1220-2, PBB-1626-2, OTL200 013 , OTL200 012, PBG-1230, PBB-1220, O1745, 98996, 98997, 98998, SALLY, KELLY

Above models are identical except for model names and appearance. Full tests were performed on PBG-1238.
 2.

Modified History			
Rev.	Description	Revision Date	Valid Report
	Original Report	December 05, 2021	EDG2111250062L00301R
M1	Update model	March 24, 2022	EDG2111250062L00301RM1

Summary of testing:

The light source of the products meets the requirement of EU 2019/2020.

Reference Test Standard:

Light emitting diode modules shall be measured according to methods set out in the following documents:

Measured parameter	Reference	Remarks
Lumen	IEC62717:2014+A1:2015+A2:2019	
Lamp efficacy, luminous efficacy	IEC62717:2014+A1:2015+A2:2019	
Lamp survival factor	IEC62717:2014+A1:2015+A2:2019	The compliance criteria of the regulations shall be applied.
Lumen maintenance	IEC62717:2014+A1:2015+A2:2019	The compliance criteria of the regulations shall be applied.
Chromaticity coordinates	EN 13032-4:2015	
Colour consistency	IEC62717:2014+A1:2015+A2:2019	
CCT	EN 13032-4:2015	
CRI	EN 13032-4:2015	
Lamp dimensions	IEC62717:2014+A1:2015+A2:2019	
Dimmability	IEC62717:2014+A1:2015+A2:2019	The presence of a symbol or warning shall be checked A list of compatible dimmers is not possible due to the arbitrary combination with control gears.
Beam angle	IEC62717:2014+A1:2015+A2:2019, IEC/TR 61341-2010	
Peak intensity	IEC62717:2014+A1:2015+A2:2019, IEC/TR 61341-2010	
Cone lumen	L2(AP)005	

Table

Table 1 Declare Information for light source of PBG-1238

a)	Useful Luminous Flux: 200lm <input checked="" type="checkbox"/> in sphere <input type="checkbox"/> in wide cone <input type="checkbox"/> in narrow cone
b)	CCT: 3000K
c)	Nominal beam angle in degrees(only for directional-lamp): N/A
d)	electrical interface details: DC4.2V
e)	L ₇₀ B ₅₀ Life Time: 30000 hours
f)	on-mode power (P _{on}): 2.1W
g)	standby power (P _{sb}): <input type="checkbox"/> - , <input checked="" type="checkbox"/> 0.50
h)	networked standby power (P _{net}) for CLS: <input checked="" type="checkbox"/> - , <input type="checkbox"/> x.xx
i)	Colour Rendering: 80
l)	Warning: <input checked="" type="checkbox"/> N/A, <input type="checkbox"/> The lamp is not suitable for dimming, <input type="checkbox"/> The lamp can be dimmed only with specific dimmers
	Energy consumption in on-mode (kWh/1000 h): 2
	Energy efficiency class: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input checked="" type="checkbox"/> F <input type="checkbox"/> G
	Outer dimensions (mm): Height 76, Width 72, Depth 8
	Spectral power distribution: See data 3
	Claim of equivalent power: <input type="checkbox"/> yes (W) , <input checked="" type="checkbox"/> -
	Chromaticity coordinates (x and y): (0.426, 0.391)
	R9: 0
	Survival factor: 1.00
	The lumen maintenance factor: 96.00%
	Displacment factor: N/A
	Colour consistency in McAdam ellipses: <6
	Claim that an LED light source replaces a fluorescent lamp without ballast: <input type="checkbox"/> yes (W) <input checked="" type="checkbox"/> -
	Flicker metric (Pst LM) (rounded to the first decimal): N/A
	Stroboscopic effect metric (SVM) (rounded to the first decimal): N/A
	Rated peak intensity (only for directional-lamp): N/A
Remark: '-': not applicable	

Data

Summary of Test Result for light source of PBG-1238			
Item	Result (Average)	Requirements	Verdict
$P_{on}(W)$	2.0	$P \leq 2W$: The determined value shall not exceed the declared value by more than 0,20 W. $2W \leq P \leq 5W$: The determined value shall not exceed the declared value by more than 10 %. $5W < P \leq 100W$: The determined value shall not exceed the declared value by more than 5 %. $P > 100W$: The determined value shall not exceed the declared value by more than 2,5 %.	P
$P_{onmax}(W)$	3.5	the declared power consumption of a light source P_{on} shall not exceed the maximum allowed power P_{onmax}	P
no-load power $P_{no}(W)$	/	shall not exceed 0,5 W	N/A
standby power $P_{sb}(W)$	0.02	shall not exceed 0,5 W	P
networked standby power $P_{net}(W)$	/	shall not exceed 0,5 W	N/A
Useful Luminous Flux(lm)	209.4	The determined value shall not be less than the declared value minus 10 %.	P
Colour Rendering(Ra)	84	≥ 80 for indoor	P
Displacement factor	/	No limit at $P_{on} \leq 5 W$; $DF \geq 0,5$ at $5 W < P_{on} \leq 10 W$; $DF \geq 0,7$ at $10 W < P_{on} \leq 25 W$; $DF \geq 0,9$ at $25 W < P_{on}$;	N/A
Colour consistency (SDCM)	5.6	within a six-step MacAdam ellipse or less	P
CCT(K)	3085	The determined value shall not deviate from the declared value by more than 10 %.	P
Beam angle (degrees)	/	The determined value shall not deviate from the declared value by more than 25 %.	N/A
Flicker [$P_{st} LM$]	/	$P_{st} LM \leq 1,0$ at full-load.	N/A
Stroboscopic effect [SVM]	/	$SVM \leq 0,9$ at full-load(except for HID with $\Phi_{use} > 4 km$ and for light sources intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a $CRI < 80$)	N/A
Lumen Maintenance factor at 3600h	96.54%	The lumen maintenance factor $XLMF\%$ after endurance testing according to Annex V shall be at least $XLMF,MIN\%$ calculated as follows: $XLMF,MIN\% = 100 \times e^{(3000 \times \ln(0.7))/ L70}$ where L70 is the declared L70B50 lifetime (in hours) If the calculated value for $XLMF,MIN$ exceeds 96,0 %, an $XLMF,MIN$ value of 96,0 % shall be used	P
Lamp Survival Factor at 3600h	1.00	At least 9 light sources of the test sample must be operational after completing the test	P

Data

Data1-1 for light source of PBG-1238:

Sample No.	Test voltage(V)	Current (A)	P _{on} (W)	Total Luminous Flux(lm)	Φ _{use} (lm)	P _{onmax} (W)	Total mains efficacy η _{TM} (lm/W)	Energy efficiency class
E2111250 062-21	4.20	0.486	2.04	207.75	207.75	3.55	91.61	F
E2111250 062-22	4.20	0.487	2.05	210.14	210.14	3.58	92.66	F
E2111250 062-23	4.20	0.484	2.03	209.02	209.02	3.57	92.17	F
E2111250 062-24	4.20	0.486	2.04	208.06	208.06	3.56	91.75	F
E2111250 062-25	4.20	0.488	2.05	210.78	210.78	3.58	92.95	F
E2111250 062-26	4.20	0.486	2.04	212.41	212.41	3.60	93.66	F
E2111250 062-27	4.20	0.487	2.05	205.84	205.84	3.54	90.77	F
E2111250 062-28	4.20	0.486	2.04	211.36	211.36	3.59	93.20	F
E2111250 062-29	4.20	0.486	2.04	206.73	206.73	3.55	91.16	F
E2111250 062-30	4.20	0.487	2.05	211.92	211.92	3.59	93.45	F
average	4.20	0.486	2.0	209.40	209.40	3.57	92.34	F

Sample No.	Displacement factor	Power Factor	CCT(K)	Colour consistency (SDCM)	coordinates x	coordinates y	Ra	R9
E2111250 062-21	N/A	1.000	3085	5.5	0.4261	0.3913	84	11
E2111250 062-22	N/A	1.000	3068	5.8	0.4266	0.3904	84	10
E2111250 062-23	N/A	1.000	3064	5.8	0.4268	0.3903	84	11
E2111250 062-24	N/A	1.000	3074	5.5	0.4266	0.3911	84	11
E2111250 062-25	N/A	1.000	3100	5.5	0.4254	0.3915	84	11
E2111250 062-26	N/A	1.000	3094	5.9	0.4252	0.3904	84	11
E2111250 062-27	N/A	1.000	3086	5.2	0.4263	0.3919	84	11
E2111250 062-28	N/A	1.000	3103	5.6	0.4251	0.3912	84	11
E2111250 062-29	N/A	1.000	3098	5.5	0.4255	0.3915	84	12
E2111250 062-30	N/A	1.000	3075	5.7	0.4263	0.3906	84	11
average	N/A	1.000	3085	5.6	0.426	0.391	84	11

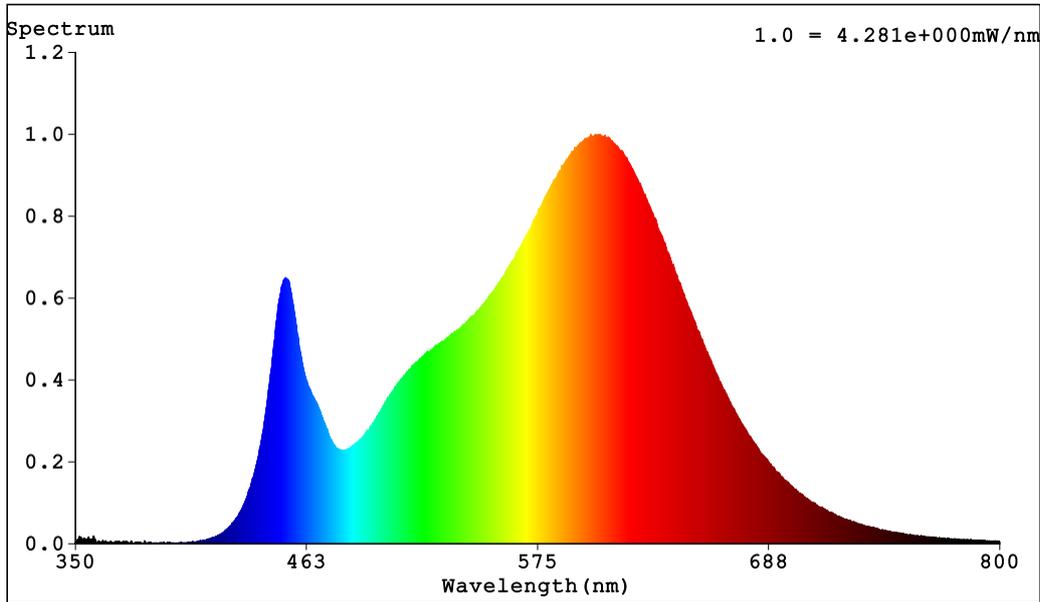
Data

Data 2-1 for light source of PBG-1238:

Sample No.	At 3600h		
	Luminous Flux (lm)	Lumen Maintenance(%)	Lamp Survival(Y/N)
E2111250 062-21	200.5	96.50%	Y
E2111250 062-22	202.9	96.56%	Y
E2111250 062-23	202.1	96.69%	Y
E2111250 062-24	200.8	96.49%	Y
E2111250 062-25	204.2	96.90%	Y
E2111250 062-26	204.4	96.21%	Y
E2111250 062-27	199.2	96.78%	Y
E2111250 062-28	203.7	96.39%	Y
E2111250 062-29	198.6	96.07%	Y
E2111250 062-30	205.2	96.85%	Y
average	202.2	96.54%	Y

Data

Data 3: Spectral power distribution for light source of PBG-1238:



Data 4: RGB data:

Color	x	y	LD(nm)	excitation purity(%)
Red	0.6887	0.3050	622	94.5
Green	0.1443	0.7094	521	96.4
Blue	0.1447	0.0485	464	79.3
The chromaticity coordinates of RGB light do not match the definition of the light source.				

Equipment

Equipment List

Device	Manufacture	Model	Serial No	Calibration Date	Due Date
Integrating Sphere	EVERFINE	R98	ELD0055	2020-12-17	2021-12-16
Power meter	YOKOGAWA	WT210	ELD0058	2020-12-07	2021-12-06
Temperature and humidity meter	Anymetre	JR900A	ESD-278	2021-05-28	2022-05-27
High accuracy array spectra-radio meter	EVERFINE	HAAS-2000	ELD0052	2020-12-17	2021-12-16
Standard Light Source	EVERFINE	D204	ELD0183	2020-12-21	2021-12-20

Photos

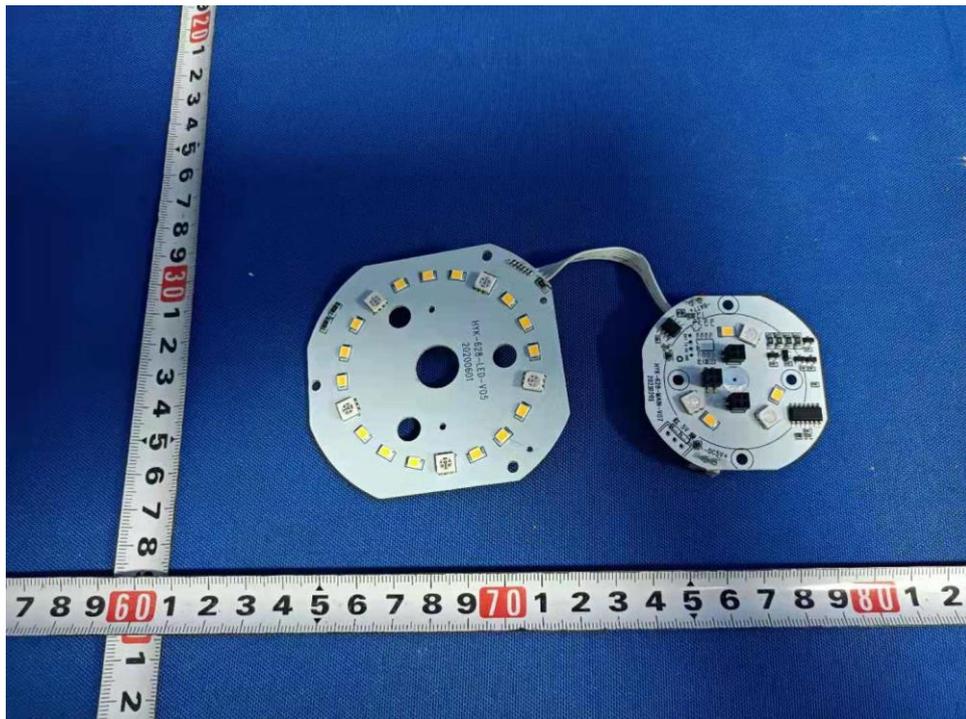


Figure 1: Overview for light source of PBG-1238

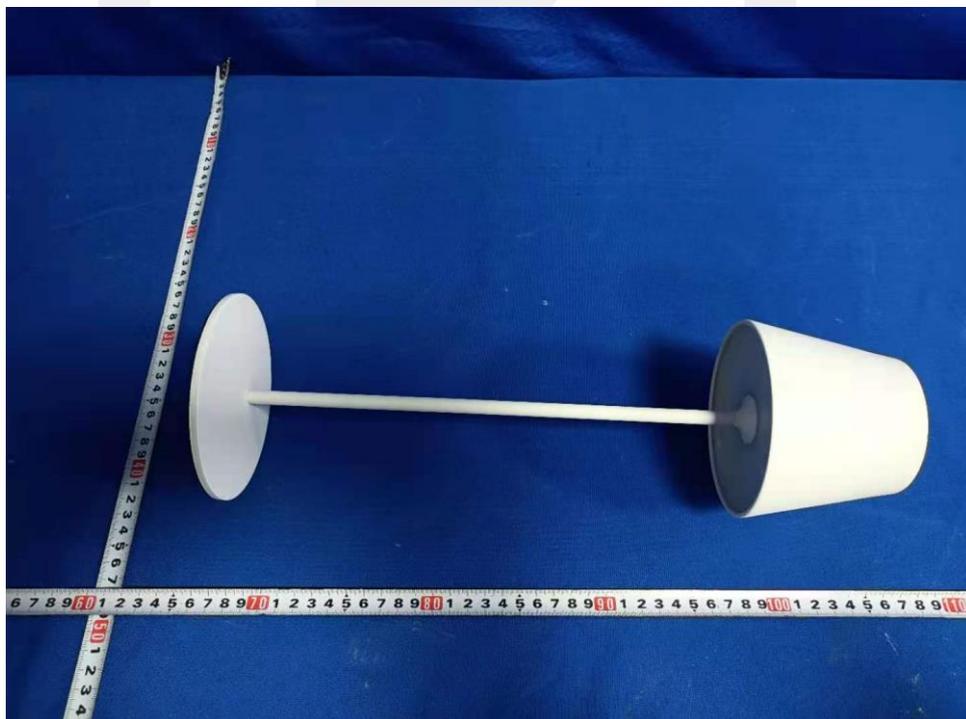


Figure 2: Overview for luminaires of PBG-1238

Photos

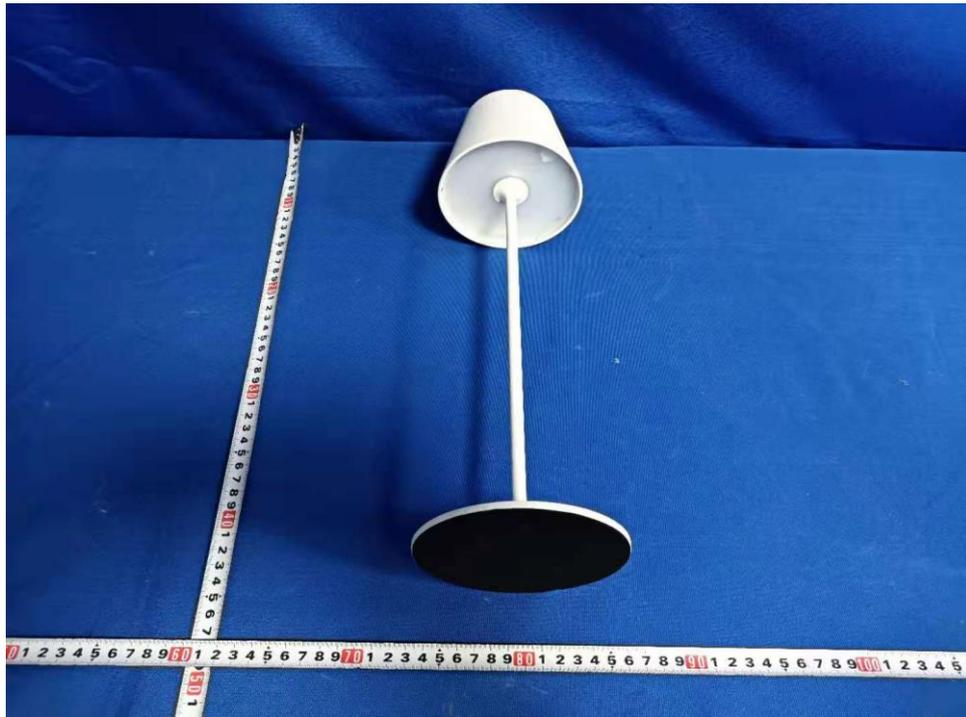


Figure 3: Overview for luminaires of PBG-1238

*** End of Report ***

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