

LED Deckenleuchte "SALAO 16 NW" IP54, 16W, 1350lm, 4000K, HF-Bewegungsm.

Produktdetails

Elegante Deckenleuchte in flachem Design mit hochwertigem Mikrowellen-Bewegungsmelder und formschönem UV-beständigem Kunststoffgehäuse mit eleganter matter Abdeckung und weißem Aussenring.

Technische Details:

- Betrieb an 230V / 50Hz
- 140 SMD LEDs
- Verbrauch im Betrieb 16W, im StandBy 0,9W
- Farbtemperatur 4000K, neutralweiß
- 1350 Lumen
- 100% Hell 0,2 Sek.
- Installationshöhe 2-4m
- Erfassungsbereich und Leuchtdauer einstellbar
- Erfassungsbereich: 360°, 1-8m Radius
- Leuchtdauer 10Sek - 12Min
- Ein/Aus 20.000x
- Leuchtdauer 30.000 Std
- Leistungsfaktor > 0,8
- Leuchtdauer 10Sek - 12Min
- Nachtlicht-Funktion mit 20% Helligkeit 5sek bis dauerhaft
- Lichtempfindlichkeit 3-2000 LUX
- für den Innen- und Außenbereich IP54
- Außendurchmesser: 265mm
- Höhe: 40mm
- Energieeffizienzklasse E



Artikel-Nr.: 22853



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ELEKTRONIK · TECHNIK · LIFESTYLE
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Tobias Meyer - Technical Director

Lehre, 01.02.2021

Elektronische Geräte, die mit der durchgestrichenen Abfalltonne gekennzeichnet sind gehören nicht in den Hausmüll!!! Diese Geräte können Sie kostenlos an Sammelstellen der Kommunen abgeben, erkundigen Sie sich hier bei Ihrer Gemeindeverwaltung, dem zuständigen Rathaus oder einem lokalem bzw. städtischem Abfallentsorgungsbetrieb. Vielen Dank.

TEST REPORT

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..... : KEYS21091611011EP-01

Tested by..... : Sunny Li

Approved by..... : Jason Zhan

Date of issue : September 29, 2021

Contents..... : 14 pages

Testing laboratory

Name : Dongguan KEYS Testing Technology Co., Ltd.

Address : . 6 / f, Building B, Chuangyigu Industrial Park, No.5 Hehe Street,
Songxi Road, Hengkeng, Liaobu, Dongguan City

Testing location : As above

Client

Name : [REDACTED]

Address..... : [REDACTED]

Manufacturer

Name : [REDACTED]

Address..... : [REDACTED]

Test specification

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

COMMISSION DELEGATED REGULATION (EU) 2019/2015

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

COMMISSION DELEGATED REGULATION (EU) 2019/2015

Non-standard test method N/A

Test item Description: Microwave LED Sensor Lamp	
Trademark: N/A	
Model and/or type reference.....: ST707A	
Rating(s)(V/Hz).....: AC220-240V, 50/60Hz, 16W	
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 : March 25,2021	
Date(s) of performance of test.....: March 26,2021- September 29,2021	
Test item particulars:	
Type of light source:	
	<input type="checkbox"/> HL <input type="checkbox"/> LFL T5HE <input type="checkbox"/> LFL T5 <input type="checkbox"/> CFLni <input type="checkbox"/> other FL <input type="checkbox"/> HPS <input type="checkbox"/> MH <input type="checkbox"/> other HID <input checked="" type="checkbox"/> LED <input type="checkbox"/> OLED <input type="checkbox"/> mixed <input type="checkbox"/> other <input type="checkbox"/> NDLS <input checked="" type="checkbox"/> DLS <input checked="" type="checkbox"/> MLS <input type="checkbox"/> NMLS <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No <input type="checkbox"/> second <input type="checkbox"/> non-clear <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No <input type="checkbox"/> second <input type="checkbox"/> non-clear <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Only with specific dimmers <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Integrated <input type="checkbox"/> External <input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor
- Lighting technology used	
- Non-directional or directional	
- Mains or non-mains	
- Connected light source (CLS)	
- Colour-tuneable light source	
- Envelope	
- High luminance light source	
- Anti-glare shield	
- Dimmable	
- Control gear	
- Use of light source:	
Lamp cap installed:	N/A
General product parameters	

Energy consumption in on-mode (kWh/1 000 h)	16
Energy efficiency class	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input checked="" type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G
Rated useful luminous flux.....(lm):	1500lm
Rated CCT(K):	4000K
Power (Pon), expressed in W.....:	16W
Standby power (Psb).....(W):	N/A
Networked standby power(Pnet)for CLS.(W): N/A	
Rated Ra.....:	85.7
Outer dimensions.....(mm):	N/A
Spectral power distribution.....:	See attachment 2
Claim of equivalent power	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A
Chromaticity coordinates (x and y).....:	X:0.3802, Y:0.4042
Peak luminous intensity(cd) :	796.7
Beam angle in degrees.....(°) :	114
R9 colour rendering index valueR9.....:	24
Survival factor	100%
The lumen maintenance factor.....:	97.40%
Displacement factor (cos φ1).....:	>0.7
Colour consistency in McAdam ellipses.....:	≤6
Claims that an LED light source replaces a fluorescent light source without integrated ballast of a particular wattage.....:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A
Flicker metric (Pst LM)	0.112
Stroboscopic effect metric (SVM).....:	0.211
Rated life time(h):	25000h
Attachments:	
The test report includes: ATTACHMENT 1(S) of Energy efficiency classes	
The test report includes: ATTACHMENT 2(S) of Spectral power distribution	
The test report includes: ATTACHMENT 3(S) of Photos	
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 AC230V and a stable ambient temperature 25 ± 10 °C.	
3、 THD ≤ 3%	

General remarks

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

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"(see Enclosure #)" refers to additional 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.

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(EU) 2019/2020			
Clause	Requirement - Test	Result - Remark	Verdict

Annex I (Clause)	Definitions in Regulation (EU) 2019/2020		P
	Number of sample used for test	10 pcs	P
(3)	Directional Light Source		P
	at least 80 % of total luminous flux within a solid angle of π sr (corresponding to a cone with angle of 120°)		P
(15)	Useful luminous flux Φ_{use}		P
	for non-directional light sources it is the total flux emitted in a solid angle of 4π sr (corresponding to a 360° sphere)		N
	for directional light sources with beam angle $\geq 90^\circ$ it is the flux emitted in a solid angle of π sr (corresponding to a cone with angle of 120°)		P
	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°)		N
Annex II (Clause)	Energy Efficiency Requirements in Regulation (EU) 2019/2020		P
1.(a)	Energy Efficiency Requirements – Light Source		P
	On-mode Power P_{on} (W):	$P_{on}=15.35W$	P
	Maximum Allowed Power P_{onmax} (W): $P_{onmax} = C \times (L + \Phi_{use}/(F \times \eta)) \times R$	$P_{onmax}=19.93W$	P
	Φ_{use} :	1500lm	P
	Threshold efficacy η (lm/W): η for LED:	120	P
	End loss factor L (W) depending on light source: L for LED:	1.5	P
	End loss factor L (W) for connected light sources: 2.0		N
	Efficacy Factor F: 1.00 for non-directional light sources (NDLS, using total flux)		N
	Efficacy Factor F: 0.85 for directional light sources (DLS, using flux in a cone)	0.85	P
	CRI Factor R: 0.65 for $CRI \leq 25$		N
	CRI Factor R: $(CRI+80)/160$ for $CRI > 25$, rounded to two decimals	$R=(80+80)/160=1.0$	P
	Correction Factor C Depending on Light Source Characteristics in Table 2		N

(EU) 2019/2020			
Clause	Requirement - Test	Result - Remark	Verdict
	Non-directional (NDLS) not operating on mains (NMLS), Basic Value: 1.00		N
	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	1.23	P
	Special Light Source Bonus on C		N
1.(a)	Standby power – Light Source		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
1.(b)	Energy Efficiency Requirements – Separate Control Gear (at full-load)		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_{sb} and P_{net} shall not be added together		N
2.	Functional Requirements – Light Source (Table 4)		P
	Colour Rendering Index CRI: ≥ 80	85.7	P
	Displacement Factor DF at Power Input P_{on} for LED and OLED MLS:		P
	No limit at $P_{on} \leq 5$ W DF ≥ 0.5 at 5 W $< P_{on} \leq 10$ W, DF ≥ 0.7 at 10 W $< P_{on} \leq 25$ W DF ≥ 0.9 at 25 W $< P_{on}$	0.893	P
	Lumen Maintenance Factor (for LED and OLED): $X_{LMF,MIN}\% = 100 \times e^{\frac{(3000 \times \ln(0.7))}{L_{70}}}$	97.40%	P

(EU) 2019/2020			
Clause	Requirement - Test	Result - Remark	Verdict
	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.	0.8	P
	Flicker for LED and OLED MLS: $P_{st} LM \leq 1.0$ at full-load	0.112	P
	Stroboscopic effect for LED and OLED MLS: $SVM \leq 0.4$ at full-load	0.211	P
3.(a)	Information to be displayed on the light source itself		P
	Useful luminous flux (lm)		P
	Correlated colour temperature (K)		P
	Beam angle (°) For directional light sources		P
3.(b)	Information to be visibly displayed on the packaging		P
3.(b)(1)	Light source placed on the market, not in a containing product		P
	(a) 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°)		P
	(b) Correlated Colour Temperature, rounded to the nearest 100 K		P
	(c) Beam angle in degrees For directional light sources		P
	(d) electrical interface details, e.g. cap- or connector-type, type of power supply (e.g. 230 V AC 50 Hz, 12 V DC)		P
	(e) L70B50 lifetime for LED and OLED light sources, expressed in hours		P
	(f) on-mode power (P_{on}), expressed in W		P
	(g) standby power (P_{sb}), 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 (P_{net}) for CLS, expressed in W and rounded to the second decimal. If the value is zero, it may be omitted from the packaging		N

(EU) 2019/2020			
Clause	Requirement - Test	Result - Remark	Verdict
	(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 $T_a \neq 25^\circ\text{C}$ or specific thermal management is necessary)		P
	(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		N
	(m) if the light source contains mercury: a warning of this, including the mercury content in mg rounded to the first decimal place		N
	(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		N
3.(b)(2)	Separate control gears 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 (P_{no}), 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

(EU) 2019/2020			
Clause	Requirement - Test	Result - Remark	Verdict
	(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		N
	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)	Information to be visibly displayed on a free-access website of the manufacturer, importer or authorised representative		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

(EU) 2019/2020			
Clause	Requirement - Test	Result - Remark	Verdict
	(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		N

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Appendix-Test Data Sheet

1. Initial Lumen Measurement and Color Performance:

Sample No.	Power Pon (W)	Disp. Factor	Luminous Flux Φ total (lm)	Efficacy (lm/W)	Color Temp (CCT)	Color rendering (Ra)	R9	SDCM	x	y
1	15.28	0.892	1562.98	102.29	4041	85.6	21	0.7	0.3794	0.4041
2	15.31	0.890	1547.35	101.07	4065	85.8	22	0.8	0.3790	0.4049
3	15.43	0.894	1564.54	101.40	4033	85.7	24	0.9	0.3805	0.4029
4	15.25	0.896	1563.76	102.54	4073	86.0	33	0.7	0.3813	0.4061
5	15.36	0.895	1565.01	101.89	4021	85.7	21	0.8	0.3832	0.4062
6	15.20	0.894	1555.17	102.31	4045	85.8	24	0.8	0.3783	0.4001
7	15.39	0.883	1564.70	101.67	4073	85.9	22	0.7	0.3798	0.4057
8	15.48	0.897	1572.36	101.57	4029	86.0	35	0.8	0.3824	0.4021
9	15.43	0.891	1565.01	101.43	4049	85.2	21	0.7	0.3798	0.4045
10	15.33	0.895	1558.29	101.65	4061	85.5	22	0.9	0.3786	0.4053
Avg.	15.35	0.893	1561.92	101.78	4049	85.7	24	0.8	0.3802	0.4042

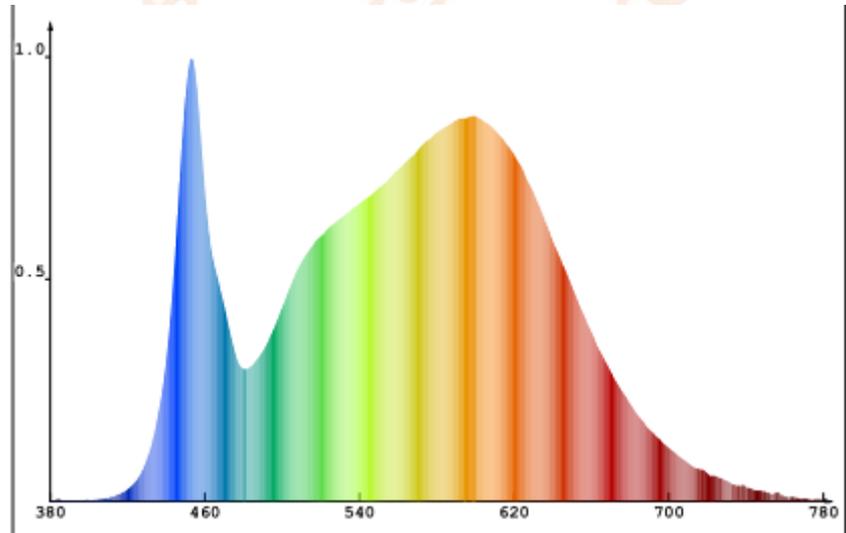
2. Different Mode Power , Flicker, Stroboscopic Effect and Lumen Maintenance Test:

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	0.105	0.209	1518.00	97.12%	P
2	N/A	N/A	N/A	0.110	0.211	1501.30	97.02%	P
3	N/A	N/A	N/A	0.112	0.215	1525.59	97.51%	P
4	N/A	N/A	N/A	0.116	0.212	1528.63	97.75%	P
5	N/A	N/A	N/A	0.110	0.210	1533.18	97.97%	P
6	N/A	N/A	N/A	0.117	0.214	1508.89	97.02%	P
7	N/A	N/A	N/A	0.113	0.209	1530.14	97.79%	P
8	N/A	N/A	N/A	0.116	0.210	1527.11	97.12%	P
9	N/A	N/A	N/A	0.111	0.209	1529.69	97.74%	P
10	N/A	N/A	N/A	0.110	0.210	1510.41	96.93%	P
Avg.	N/A	N/A	N/A	0.112	0.211	1521.29	97.40%	P

Energy efficiency classes			
Standard	Clause	Model No.	Verdict
(EU) 2019/2015	Energy class	ST707A	P
Conditions	-Test conditions: -ambition: 25°C/65%R.H. -Test voltage:AC230V		
Φ use	1500lm (Declared)		
P_{on}	$P_{on} = 16W$ (Declared)		
F_{TM}	1.176		
η_{TM}	11.25 lm/W (Declared)		
Technical requirements	Test result		
$\eta_{TM} = (\Phi_{use}/P_{on}) \times F_{TM} (lm/W).$	Energy efficiency class	Total mains efficacy η_{TM} (lm/W)	--
	A	$210 \leq \eta_{TM}$	N
	B	$185 \leq \eta_{TM} < 210$	N
	C	$160 \leq \eta_{TM} < 185$	N
	D	$135 \leq \eta_{TM} < 160$	N
	E	$110 \leq \eta_{TM} < 135$	P
	F	$85 \leq \eta_{TM} < 110$	N
	G	$\eta_{TM} < 85$	N
Factors F _{TM} by light source type			
Light source type	Factor F _{TM}		--
Non-directional (NDLS) operating on mains (MLS)	1.000		N
Non-directional (NDLS) not operating on mains (NMLS)	0.926		N
Directional (DLS) operating on mains (MLS)	1.176		P
Directional (DLS) not operating on mains (NMLS)	1.089		N

ATTACHMENT 2(S)

Spectral power distribution



ATTACHMENT 3(S)



----- End of test report -----