

AEC Lighting Solutions Co., Ltd

SAR COMPLIANCE REPORT

Report Type:

FCC SAR assessment report

Model:

RAL1K1R, RAL501R

REPORT NUMBER:

221100673SHA-002

ISSUE DATE:

Apr 12, 2023

DOCUMENT CONTROL NUMBER:

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Report no.: 221100673SHA-002

Applicant: AEC Lighting Solutions Co., Ltd

2548 Bao'an Highway, Jiading District, Shanghai 201801, China

Manufacturer: AEC Lighting Solutions Co., Ltd

2548 Bao'an Highway, Jiading District, Shanghai 201801, China

FCC ID: 2ANLP-WALILAMP

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY: REVIEWED BY:

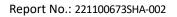
Project Engineer

Teddy yin

Teddy Yin Wakeyou Wang

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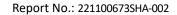
Reviewer





Revision History

Report No.	Version	Description	Issued Date
221100673SHA-002	Rev. 01	Initial issue of report	Apr 12, 2023





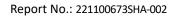
1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	rechargeable & multifunctional LED area light with human body sensor
Type/Model:	RAL1K1R, RAL501R
	The EUT is a LED Rechargeable Work Light that contains the microwave
5	modular of 5.8GHz. Both models contain the same microwave modular.
Description of EUT:	Both models were tested and the worst data is listed in the report.
Rating:	DC 5V
Category of EUT:	Class B
EUT type:	☐ Table top ☐ Floor standing
Software Version:	PBA-K58S01-WF-017N-C1 R01
Hardware Version:	KU5206A-E
Sample Identification No.:	0221204-13-002
Sample received date:	Nov 14, 2022
Date of test:	Nov 14, 2022~Jan 4, 2023

1.2 Technical Specification

Frequency Range:	5773-5830MHz
Support Standards:	/
Type of Modulation:	FSK
Channel Number:	20
Data Rate:	/
Channel Separation:	ЗМНz
Antenna Information:	Panel PCB antenna, 4.75dBi

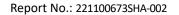




1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized,	CNAS Accreditation Lab Registration No. CNAS L0139
certified, or accredited by these	FCC Accredited Lab Designation Number: CN0175
organizations:	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02





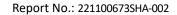
2 SAR Assessment

Test result: Pass

2.1 SAR Test Exclusion Limit

100 MHz - 6 GHz and \leq 50 mm

MHz	5	10	15	20	25	mm				
150	39	77	116	155	194	11111				
300	27	55	82	110	137					
450	22	45	67	89	112					
835	16	33	49	66	82					
900	16	32	47	63	79					
1500	12	24	37	49	61	SAR Test				
1900	11	22	33	44	54	Exclusion Threshold (mW)				
2450	10	19	29	38	48	2 6561 (42)				
3600	8	16	24	32	40					
5200	7	13	20	26	33					
5400	6	13	19	26	32					
5800	6	12	19	25	31					
MHz	30	35	40	45	50	mm				
150	232	271	310	349	387					
300	164	192	219	246	274					
450	134	157	179	201	224					
835	98	115	131	148	164					
900	95	111	126	142	158	~				
1500	73	86	98	110	122	SAR Test Exclusion				
1900	65	76	87	98	109	Threshold (mW)				
2450	57	67	77	86	96	()				
3600	47	55	63	71	79					
5200	39	46	53	59	66					
5400	39	45	52	58	65					
5800	37	44	50	56	62					





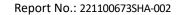
TEST REPORT

100 MHz - 6 GHz and > 50 mm

MHz	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	mm
100	474	481	487	494	501	507	514	521	527	534	541	547	554	561	567	
150	387	397	407	417	427	437	447	457	467	477	487	497	507	517	527	
300	274	294	314	334	354	374	394	414	434	454	474	494	514	534	554	
450	224	254	284	314	344	374	404	434	464	494	524	554	584	614	644	
835	164	220	275	331	387	442	498	554	609	665	721	776	832	888	943	
900	158	218	278	338	398	458	518	578	638	698	758	818	878	938	998	
1500	122	222	322	422	522	622	722	822	922	1022	1122	1222	1322	1422	1522	mW
1900	109	209	309	409	509	609	709	809	909	1009	1109	1209	1309	1409	1509	
2450	96	196	296	396	496	596	696	796	896	996	1096	1196	1296	1396	1496	
3600	79	179	279	379	479	579	679	779	879	979	1079	1179	1279	1379	1479	
5200	66	166	266	366	466	566	666	766	866	966	1066	1166	1266	1366	1466	
5400	65	165	265	365	465	565	665	765	865	965	1065	1165	1265	1365	1465	
5800	62	162	262	362	462	562	662	762	862	962	1062	1162	1262	1362	1462	

< 100 MHz and < 200 mm

MHz	< 50	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	mm
100	237	474	481	487	494	501	507	514	521	527	534	541	547	554	561	567	
50	308	617	625	634	643	651	660	669	677	686	695	703	712	721	729	738	
10	474	948	961	975	988	1001	1015	1028	1041	1055	1068	1081	1095	1108	1121	1135	
1	711	1422	1442	1462	1482	1502	1522	1542	1562	1582	1602	1622	1642	1662	1682	1702	mW
0.1	948	1896	1923	1949	1976	2003	2029	2056	2083	2109	2136	2163	2189	2216	2243	2269	
0.05	1019	2039	2067	2096	2125	2153	2182	2211	2239	2268	2297	2325	2354	2383	2411	2440	
0.01	1185	2370	2403	2437	2470	2503	2537	2570	2603	2637	2670	2703	2737	2770	2803	2837	





2.2 Assessment Results

The highest PK EIRP adjusted with tune-up tolerance is 94.9-95.3= -0.4dBm =
0.912mW < <u>6mW (Test Exclusion Thresholds of 5800MHz at 5mm)</u> . Therefore, the SAR
requirement is deemed to be satisfied without test.