



TEST REPORT

Reference No. : WTS17F0578499N
Applicant : Shenzhen Destar Opto-Electronics Co., LTD
Address : 6th floor, 3 building HanHaiDa 7th Industry park, GongMing YuLv Village, Guangming New district, ShenZhen, GuangDong
Manufacturer : Shenzhen Destar Opto-Electronics Co., LTD
Address : 6th floor, 3 building HanHaiDa 7th Industry park, GongMing YuLv Village, Guangming New district, ShenZhen, GuangDong
Product Name : SMD3030
Model No : 3N128-AAKABK-ZJP-1-6
Ratings : 6.0-6.4VDC, 175mA, 1W
Standards : IES LM-80-08
Approved Method: Measuring Lumen Maintenance of LED Light Source
Date of Receipt sample : 2016-09-07
Date of Test : 2016-09-07 to 2017-06-02
Date of Issue : 2017-06-02
Test Report Form No. : WPL-LM8008A-02A
Test Result : See the attached sheets

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

Waltek Services (Foshan) Co., Ltd.

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Compiled by:

Finn Yu / Project Engineer

Approved by:



Alvin Xu / Manager



1. Description of Test Samples

Classification: LED Package
Part Name: SMD3030
Part Number: 3N128-AAKABK-ZJP-1-6
Nominal CCT: 2700K

This report also covers the following Series products:

N/A

2. Standards Used:

- ③ IESNA LM-80-08: IESNA Approved Method for Measuring Lumen Maintenance of LED Light Sources.
- ③ ENERGY STAR® Program Guidance Regarding LED Package, LED Array and LED Module Lumen Maintenance Performance Data Supporting Qualification of Lighting Products(This test method was not accredited by IAS)

3. Operating Cycle

The testing facility used by Waltek Services (Foshan) Co., Ltd. is located at No. 13-19, 2/F, 2nd Building, Sunlink International Machinery City, Chencun Town, Shunde District, Foshan, Guangdong, China

4. Operating Cycle

Samples are driven with a constant direct current (DC)

5. Ambient Conditions

For lumen maintenance test, samples were operated in thermal chambers with minimal ambient airflow. For long term reliability test, the case temperature was controlled by mounting several thermocouples on a sample reliability stress board at the designated thermal measurement point, as shown in Attachment. The ambient temperature T_A was measured by several thermocouples at a distance of 5 mm above the reliability test board. The relative humidity within chamber was less than 65%.

For photometry measurement, temperature was set to $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$, RH <65%.

6. Photometry Measurement Uncertainty

The uncertainty of the light output measurements is $U=1.8\%$ ($K=2$), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is $U=20\text{K}$ ($K=2$), at the 95% confidence level. This calibration results traceable to the Guangzhou Institute of Measurement and Testing Technology.

**7. Sample Set**

Part Number:	3N128-AAKABK-ZJP-1-6
Number of Units:	25
Actual Case Temperature(T_S):	$T_S = 55.7^{\circ}\text{C}$
Actual Ambient Temperature(T_A):	$T_A = 54.5^{\circ}\text{C}$
Life Test Drive Current:	$I_F = 175\text{mA}$
Measurement Current:	$I_F = 175\text{mA}$

Part Number:	3N128-AAKABK-ZJP-1-6
Number of Units:	25
Actual Case Temperature(T_S):	$T_S = 85.6^{\circ}\text{C}$
Actual Ambient Temperature(T_A):	$T_A = 84.5^{\circ}\text{C}$
Life Test Drive Current:	$I_F = 175\text{mA}$
Measurement Current:	$I_F = 175\text{mA}$

Part Number:	3N128-AAKABK-ZJP-1-6
Number of Units:	25
Actual Case Temperature(T_S):	$T_S = 105.6^{\circ}\text{C}$
Actual Ambient Temperature(T_A):	$T_A = 104.7^{\circ}\text{C}$
Life Test Drive Current:	$I_F = 175\text{mA}$
Measurement Current:	$I_F = 175\text{mA}$

WALTEK

**Data sheet 1:**

Driver current	175(mA)	Target Case temperature	55°C
Measurement current	175(mA)	Actual case temperature	55.7°C

Lumen Maintenance:								
S/N	TLF(lm)	V _F (V)	Lumen Maintenance (%)					
	Initial(0hr)		1000h	2000h	3000h	4000h	5000h	6000h
01	111.52	6.28	100.04	99.64	99.10	98.35	97.69	96.80
02	111.60	6.24	100.00	99.63	99.07	98.29	97.61	96.68
03	110.15	6.28	100.02	99.61	99.03	98.21	97.50	96.53
04	110.21	6.21	100.01	99.65	99.12	98.38	97.74	96.86
05	111.69	6.20	100.01	99.63	99.09	98.33	97.66	96.75
06	113.57	6.25	100.03	99.62	99.05	98.25	97.55	96.59
07	111.74	6.28	100.02	99.65	99.12	98.38	97.74	96.86
08	110.61	6.27	100.03	99.67	99.13	98.33	97.66	96.75
09	111.61	6.22	100.00	99.62	99.05	98.25	97.55	96.59
10	111.40	6.28	100.00	99.65	99.12	98.39	97.74	96.86
11	112.34	6.24	99.97	99.63	99.09	98.33	97.66	96.75
12	112.14	6.25	99.98	99.62	99.05	98.25	97.55	96.59
13	110.04	6.28	100.03	99.70	99.24	98.52	97.88	96.92
14	111.04	6.29	99.98	99.64	99.11	98.36	97.70	96.81
15	109.77	6.28	99.99	99.62	99.06	98.28	97.59	96.66
16	111.44	6.29	99.99	99.65	99.14	98.42	97.78	96.92
17	110.60	6.21	100.02	99.68	99.19	98.45	97.76	96.75
18	110.66	6.29	99.97	99.62	99.06	98.28	97.59	96.66
19	110.45	6.28	99.97	99.65	99.14	98.42	97.78	96.92
20	111.25	6.28	99.93	99.64	99.11	98.36	97.70	96.81
21	113.95	6.25	100.02	99.62	99.06	98.28	97.59	96.66
22	111.21	6.20	99.95	99.66	99.15	98.45	97.83	96.98
23	111.96	6.24	100.01	99.65	99.12	98.39	97.75	96.87
24	110.01	6.26	99.95	99.63	99.08	98.32	97.64	96.73
25	111.47	6.22	99.96	99.66	99.15	98.45	97.83	96.98
Avg	111.30	6.26	100.00	99.64	99.11	98.35	97.68	96.77
Max	113.95	6.29	100.04	99.70	99.24	98.52	97.88	96.98
Min	109.77	6.20	99.93	99.61	99.03	98.21	97.50	96.53
Med	111.40	6.26	100.00	99.64	99.11	98.35	97.69	96.75
Std. dev	1.0271	0.0303	0.0295	0.0215	0.0486	0.0774	0.1006	0.1285

TM-21 Projection:

Test Duration	6,000hours
Failures Observed	0
α	6.613E-06
β	1.009
Calculated L ₇₀	55,000
Reported L ₇₀	>36000



Chromaticity Shift($\Delta u'v'$):									
S/N	Initial(0hr)		CCT (K)	1000h	2000h	3000h	4000h	5000h	6000h
	CIEu'	CIEv'							
01	0.2613	0.5326	2703	0.0009	0.0014	0.0018	0.0022	0.0027	0.0032
02	0.2608	0.5335	2710	0.0010	0.0014	0.0018	0.0022	0.0027	0.0031
03	0.2617	0.5326	2695	0.0011	0.0015	0.0019	0.0023	0.0027	0.0031
04	0.2574	0.5315	2790	0.0011	0.0015	0.0019	0.0023	0.0027	0.0031
05	0.2607	0.5313	2721	0.0010	0.0014	0.0019	0.0023	0.0027	0.0033
06	0.2583	0.5315	2770	0.0011	0.0015	0.0019	0.0023	0.0027	0.0032
07	0.2595	0.5319	2743	0.0011	0.0015	0.0019	0.0023	0.0027	0.0032
08	0.2627	0.5321	2678	0.0012	0.0016	0.0019	0.0023	0.0027	0.0032
09	0.2605	0.5320	2724	0.0011	0.0015	0.0019	0.0024	0.0028	0.0034
10	0.2612	0.5326	2706	0.0011	0.0015	0.0019	0.0024	0.0027	0.0033
11	0.2600	0.5315	2734	0.0012	0.0015	0.0020	0.0024	0.0028	0.0033
12	0.2610	0.5335	2707	0.0013	0.0016	0.0020	0.0024	0.0028	0.0033
13	0.2617	0.5326	2696	0.0011	0.0015	0.0019	0.0024	0.0028	0.0035
14	0.2612	0.5327	2706	0.0012	0.0015	0.0020	0.0024	0.0028	0.0034
15	0.2608	0.5315	2719	0.0012	0.0016	0.0020	0.0024	0.0028	0.0034
16	0.2613	0.5327	2704	0.0013	0.0016	0.0020	0.0024	0.0028	0.0033
17	0.2575	0.5316	2787	0.0012	0.0015	0.0020	0.0024	0.0028	0.0035
18	0.2611	0.5316	2712	0.0012	0.0015	0.0020	0.0024	0.0028	0.0034
19	0.2619	0.5327	2691	0.0013	0.0016	0.0020	0.0025	0.0028	0.0034
20	0.2594	0.5318	2747	0.0013	0.0016	0.0020	0.0024	0.0028	0.0034
21	0.2585	0.5316	2766	0.0012	0.0015	0.0020	0.0025	0.0029	0.0036
22	0.2606	0.5313	2724	0.0012	0.0015	0.0020	0.0024	0.0028	0.0035
23	0.2599	0.5315	2736	0.0013	0.0016	0.0020	0.0025	0.0028	0.0035
24	0.2625	0.5320	2681	0.0013	0.0016	0.0020	0.0025	0.0028	0.0034
25	0.2604	0.5320	2724	0.0012	0.0015	0.0020	0.0025	0.0029	0.0036
Avg	0.2605	0.5321	2723	0.0012	0.0015	0.0019	0.0024	0.0028	0.0033
Max	0.2627	0.5335	2790	0.0013	0.0016	0.0020	0.0025	0.0029	0.0036
Min	0.2574	0.5313	2678	0.0009	0.0014	0.0018	0.0022	0.0027	0.0031
Med	0.2608	0.5320	2719	0.0012	0.0015	0.0020	0.0024	0.0028	0.0034
Std. dev	0.0014	0.0006	30.374 7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

**Data sheet 2:**

Driver current	175(mA)	Target Case temperature	85°C
Measurement current	175(mA)	Actual case temperature	85.6°C

Lumen Maintenance:								
S/N	TLF(lm)	V _F (V)	Lumen Maintenance(%)					
	Initial(0hr)		1000h	2000h	3000h	4000h	5000h	6000h
26	111.28	6.24	99.98	99.63	99.05	98.22	97.26	96.18
27	112.39	6.20	99.95	99.62	99.02	98.15	97.16	96.04
28	110.53	6.27	99.94	99.60	98.97	98.06	97.02	95.85
29	112.52	6.25	99.94	99.64	99.07	98.25	97.31	96.25
30	111.49	6.27	99.92	99.63	99.04	98.19	97.21	96.11
31	109.93	6.28	99.90	99.61	98.99	98.10	97.08	95.93
32	111.40	6.31	99.91	99.64	99.07	98.25	97.31	96.25
33	110.34	6.26	99.88	99.63	99.04	98.19	97.21	96.11
34	112.00	6.25	99.87	99.61	98.99	98.10	97.08	95.93
35	110.83	6.29	99.88	99.64	99.07	98.25	97.31	96.25
36	110.58	6.26	99.85	99.63	99.04	98.19	97.21	96.12
37	111.11	6.25	99.83	99.61	98.99	98.10	97.08	95.93
38	111.91	6.23	99.84	99.65	99.09	98.29	97.36	96.32
39	110.22	6.28	99.82	99.63	99.06	98.22	97.27	96.19
40	111.07	6.28	99.79	99.62	99.01	98.14	97.14	96.01
41	109.89	6.25	99.81	99.65	99.09	98.29	97.36	96.32
42	110.70	6.31	99.78	99.63	99.06	98.23	97.27	96.19
43	111.56	6.22	99.76	99.62	99.01	98.14	97.14	96.01
44	110.91	6.25	99.78	99.65	99.09	98.29	97.37	96.33
45	109.85	6.25	99.74	99.63	99.06	98.23	97.27	96.19
46	113.41	6.29	99.72	99.62	99.01	98.14	97.14	96.01
47	109.94	6.26	99.75	99.65	99.11	98.32	97.42	96.40
48	113.11	6.25	99.71	99.64	99.07	98.26	97.32	96.27
49	112.82	6.21	99.69	99.62	99.03	98.18	97.19	96.09
50	111.14	6.24	99.71	99.65	99.11	98.32	97.42	96.40
Avg	111.24	6.26	99.83	99.63	99.05	98.20	97.24	96.15
Max	113.41	6.31	99.98	99.65	99.11	98.32	97.42	96.40
Min	109.85	6.20	99.69	99.60	98.97	98.06	97.02	95.85
Med	111.11	6.25	99.83	99.63	99.05	98.22	97.26	96.18
Std. dev	1.0299	0.0275	0.0853	0.0144	0.0393	0.0736	0.1120	0.1553

TM-21 Projection:

Test Duration	6,000hours
Failures Observed	0
α	7.693E-06
β	1.010
Calculated L ₇₀	48,000
Reported L ₇₀	>36000



Chromaticity Shift($\Delta u'v'$):									
S/N	Initial(0hr)		CCT (K)	1000h	2000h	3000h	4000h	5000h	6000h
	CIEu'	CIEv'							
01	0.2609	0.5330	2710	0.0009	0.0014	0.0019	0.0024	0.0029	0.0034
02	0.2595	0.5318	2744	0.0010	0.0015	0.0019	0.0024	0.0028	0.0033
03	0.2611	0.5304	2717	0.0010	0.0015	0.0020	0.0024	0.0029	0.0034
04	0.2584	0.5317	2768	0.0011	0.0016	0.0020	0.0024	0.0029	0.0033
05	0.2598	0.5317	2738	0.0010	0.0015	0.0020	0.0025	0.0029	0.0035
06	0.2608	0.5336	2711	0.0011	0.0015	0.0020	0.0024	0.0029	0.0034
07	0.2605	0.5316	2724	0.0011	0.0016	0.0020	0.0025	0.0029	0.0035
08	0.2607	0.5303	2726	0.0012	0.0016	0.0020	0.0025	0.0029	0.0034
09	0.2580	0.5316	2776	0.0011	0.0015	0.0020	0.0025	0.0030	0.0036
10	0.2613	0.5337	2700	0.0011	0.0015	0.0020	0.0025	0.0029	0.0035
11	0.2625	0.5340	2674	0.0012	0.0016	0.0021	0.0025	0.0030	0.0035
12	0.2610	0.5328	2709	0.0012	0.0016	0.0021	0.0025	0.0029	0.0034
13	0.2596	0.5318	2741	0.0011	0.0015	0.0020	0.0025	0.0030	0.0036
14	0.2610	0.5336	2706	0.0012	0.0015	0.0020	0.0025	0.0029	0.0035
15	0.2613	0.5305	2713	0.0012	0.0016	0.0021	0.0026	0.0030	0.0036
16	0.2623	0.5338	2680	0.0013	0.0016	0.0021	0.0025	0.0029	0.0035
17	0.2603	0.5315	2729	0.0012	0.0015	0.0020	0.0025	0.0030	0.0037
18	0.2595	0.5317	2744	0.0012	0.0016	0.0020	0.0025	0.0029	0.0036
19	0.2610	0.5327	2710	0.0013	0.0016	0.0021	0.0026	0.0030	0.0036
20	0.2622	0.5338	2682	0.0013	0.0017	0.0021	0.0025	0.0029	0.0035
21	0.2589	0.5301	2763	0.0012	0.0015	0.0021	0.0026	0.0030	0.0037
22	0.2605	0.5302	2729	0.0012	0.0016	0.0020	0.0025	0.0029	0.0036
23	0.2586	0.5317	2763	0.0013	0.0016	0.0021	0.0026	0.0030	0.0036
24	0.2597	0.5318	2740	0.0013	0.0017	0.0021	0.0026	0.0029	0.0035
25	0.2608	0.5330	2712	0.0012	0.0016	0.0021	0.0026	0.0030	0.0037
Avg	0.2604	0.5321	2724	0.0012	0.0016	0.0020	0.0025	0.0029	0.0035
Max	0.2625	0.5340	2776	0.0013	0.0017	0.0021	0.0026	0.0030	0.0037
Min	0.2580	0.5301	2674	0.0009	0.0014	0.0019	0.0024	0.0028	0.0033
Med	0.2607	0.5318	2724	0.0012	0.0016	0.0020	0.0025	0.0029	0.0035
Std. dev	0.0012	0.0012	26.982 8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

**Data sheet 3:**

Driver current	175(mA)	Target Case temperature	105°C
Measurement current	175(mA)	Actual case temperature	105.6°C

Lumen Maintenance:								
S/N	TLF(lm)	V _F (V)	Lumen Maintenance(%)					
	Initial(0hr)		1000h	2000h	3000h	4000h	5000h	6000h
51	111.27	6.28	99.67	99.23	98.62	97.81	96.79	95.50
52	113.86	6.30	99.66	99.20	98.57	97.73	96.67	95.34
53	113.21	6.20	99.65	99.16	98.50	97.62	96.51	95.11
54	114.06	6.31	99.68	99.25	98.65	97.85	96.85	95.58
55	111.51	6.24	99.67	99.22	98.60	97.77	96.73	95.42
56	113.60	6.25	99.65	99.18	98.53	97.67	96.58	95.21
57	111.63	6.22	99.68	99.25	98.65	97.85	96.85	95.59
58	114.69	6.31	99.67	99.22	98.60	97.77	96.73	95.43
59	113.80	6.21	99.65	99.18	98.53	97.67	96.58	95.21
60	110.37	6.27	99.68	99.25	98.65	97.85	96.85	95.59
61	113.49	6.26	99.67	99.22	98.60	97.78	96.74	95.43
62	109.47	6.27	99.65	99.18	98.53	97.67	96.58	95.21
63	112.36	6.22	99.69	99.26	98.68	97.89	96.91	95.67
64	114.05	6.30	99.67	99.23	98.63	97.82	96.80	95.52
65	113.25	6.21	99.66	99.20	98.56	97.71	96.64	95.30
66	112.67	6.25	99.69	99.26	98.68	97.90	96.91	95.67
67	112.06	6.25	99.67	99.23	98.63	97.82	96.80	95.52
68	113.16	6.24	99.66	99.20	98.56	97.71	96.64	95.30
69	112.54	6.22	99.69	99.26	98.68	97.90	96.91	95.68
70	109.90	6.27	99.68	99.23	98.63	97.82	96.80	95.52
71	112.71	6.25	99.66	99.20	98.56	97.71	96.64	95.30
72	111.69	6.25	99.69	99.28	98.70	97.94	96.97	95.76
73	111.86	6.22	99.68	99.25	98.66	97.86	96.86	95.61
74	113.04	6.25	99.67	99.21	98.59	97.76	96.71	95.40
75	113.18	6.28	99.69	99.28	98.70	97.94	96.97	95.76
Avg	112.54	6.25	99.67	99.23	98.61	97.79	96.76	95.47
Max	114.69	6.31	99.69	99.28	98.70	97.94	96.97	95.76
Min	109.47	6.20	99.65	99.16	98.50	97.62	96.51	95.11
Med	112.71	6.25	99.67	99.23	98.62	97.81	96.79	95.50
Std. dev	1.3333	0.0323	0.0136	0.0325	0.0579	0.0900	0.1309	0.1834

TM-21 Projection:

Test Duration	6,000hours
Failures Observed	0
α	8.550E-06
β	1.009
Calculated L ₇₀	43,000
Reported L ₇₀	>36000

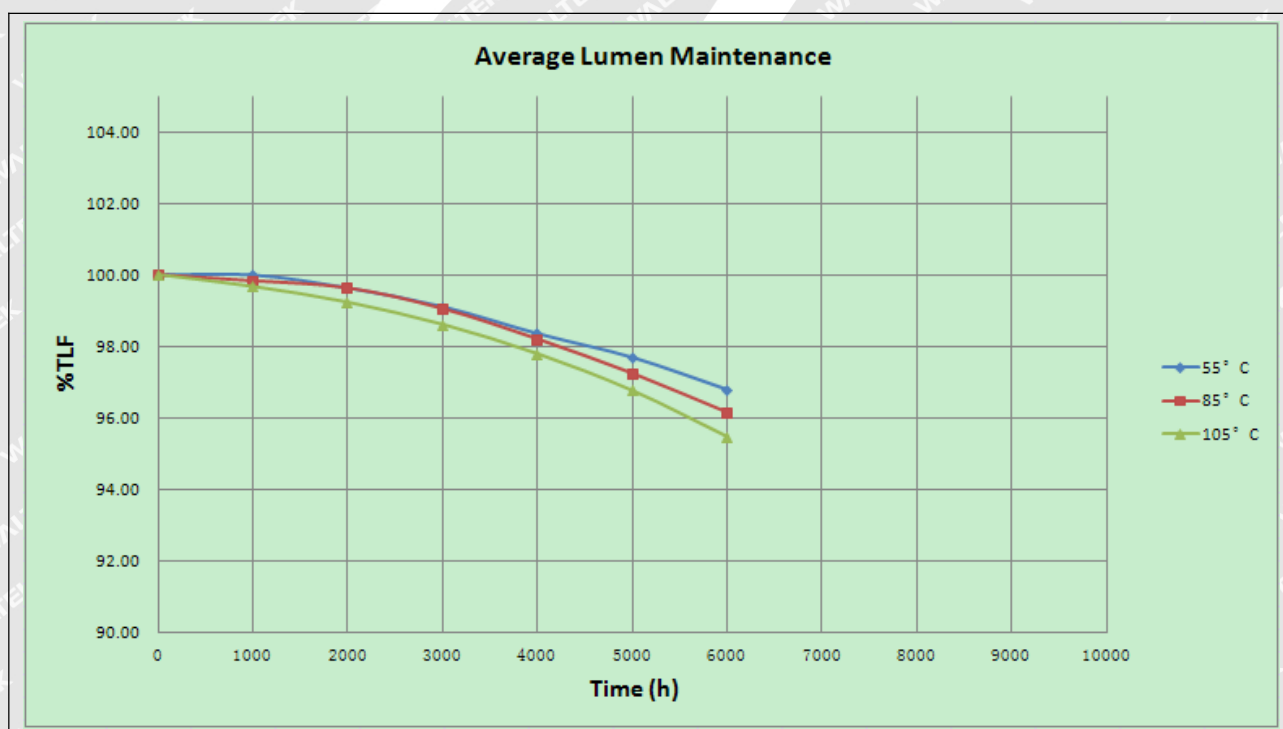


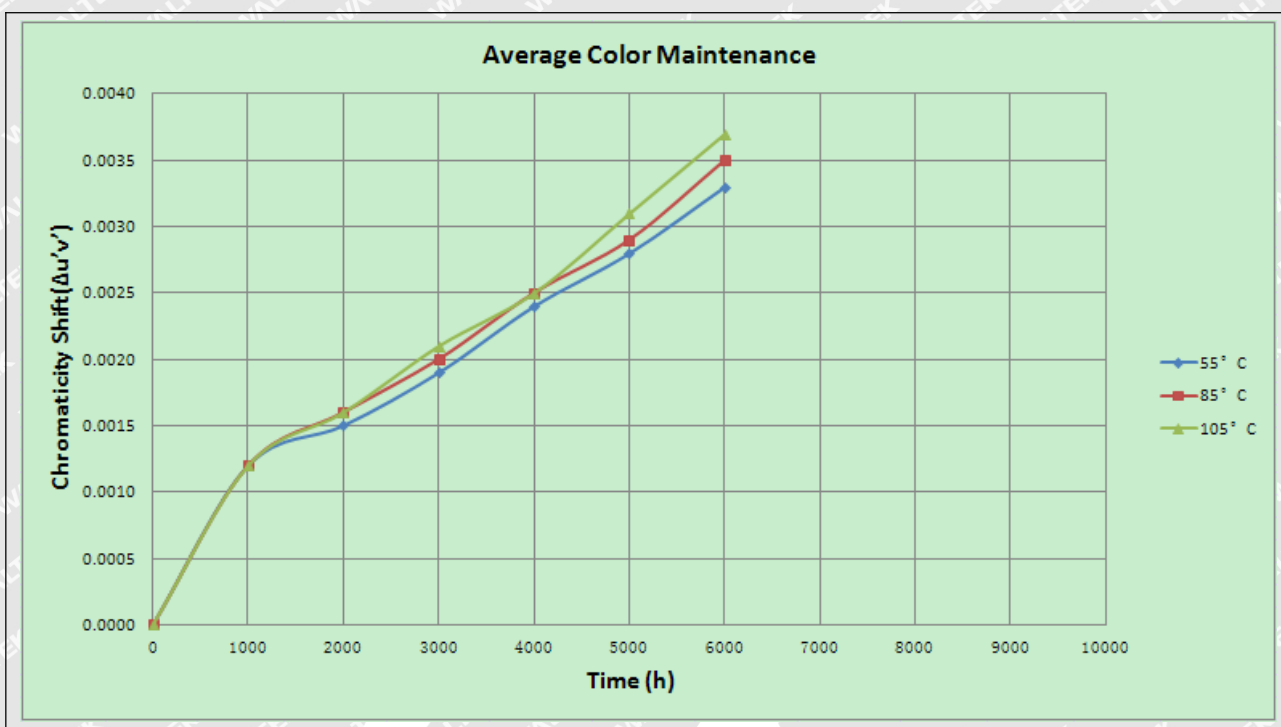
Chromaticity Shift($\Delta u'v'$):									
S/N	Initial(0hr)		CCT (K)	1000h	2000h	3000h	4000h	5000h	6000h
	CIEu'	CIEv'							
01	0.2584	0.5318	2767	0.0010	0.0015	0.0020	0.0026	0.0031	0.0037
02	0.2615	0.5338	2696	0.0010	0.0016	0.0020	0.0025	0.0031	0.0036
03	0.2602	0.5311	2732	0.0011	0.0016	0.0021	0.0026	0.0030	0.0036
04	0.2614	0.5339	2698	0.0012	0.0016	0.0021	0.0025	0.0030	0.0035
05	0.2616	0.5335	2694	0.0011	0.0015	0.0021	0.0026	0.0032	0.0038
06	0.2621	0.5326	2688	0.0011	0.0016	0.0020	0.0025	0.0031	0.0037
07	0.2620	0.5317	2693	0.0012	0.0016	0.0021	0.0025	0.0031	0.0036
08	0.2618	0.5339	2690	0.0012	0.0016	0.0021	0.0025	0.0030	0.0035
09	0.2604	0.5312	2727	0.0011	0.0015	0.0021	0.0026	0.0032	0.0038
10	0.2616	0.5323	2698	0.0012	0.0016	0.0020	0.0025	0.0031	0.0037
11	0.2609	0.5316	2716	0.0012	0.0016	0.0021	0.0025	0.0031	0.0037
12	0.2613	0.5322	2705	0.0013	0.0016	0.0021	0.0025	0.0030	0.0036
13	0.2599	0.5313	2738	0.0012	0.0015	0.0021	0.0026	0.0032	0.0039
14	0.2615	0.5339	2694	0.0012	0.0016	0.0021	0.0025	0.0031	0.0037
15	0.2602	0.5311	2731	0.0013	0.0016	0.0021	0.0025	0.0031	0.0037
16	0.2605	0.5314	2724	0.0013	0.0016	0.0021	0.0025	0.0030	0.0036
17	0.2618	0.5336	2689	0.0012	0.0015	0.0021	0.0026	0.0032	0.0039
18	0.2619	0.5326	2693	0.0012	0.0016	0.0021	0.0025	0.0031	0.0038
19	0.2600	0.5313	2736	0.0013	0.0016	0.0021	0.0025	0.0031	0.0037
20	0.2615	0.5322	2702	0.0013	0.0016	0.0021	0.0025	0.0030	0.0036
21	0.2606	0.5315	2723	0.0012	0.0015	0.0021	0.0026	0.0032	0.0039
22	0.2617	0.5336	2692	0.0012	0.0016	0.0021	0.0025	0.0031	0.0038
23	0.2621	0.5317	2691	0.0013	0.0016	0.0021	0.0025	0.0031	0.0037
24	0.2607	0.5315	2720	0.0013	0.0016	0.0021	0.0025	0.0030	0.0036
25	0.2588	0.5300	2765	0.0012	0.0015	0.0021	0.0026	0.0032	0.0039
Avg	0.2610	0.5322	2712	0.0012	0.0016	0.0021	0.0025	0.0031	0.0037
Max	0.2621	0.5339	2767	0.0013	0.0016	0.0021	0.0026	0.0032	0.0039
Min	0.2584	0.5300	2688	0.0010	0.0015	0.0020	0.0025	0.0030	0.0035
Med	0.2614	0.5318	2702	0.0012	0.0016	0.0021	0.0025	0.0031	0.0037
Std. dev	0.0010	0.0011	23.286 1	0.0001	0.0000	0.0000	0.0000	0.0001	0.0001

**Test result:****Data Summary of Lumen and Color Maintenance:**

Temp.	TLF(lm)	VF(V)	Luminous Maintenance (%)					
	Initial(0hr)		1000h	2000h	3000h	4000h	5000h	6000h
55°C (Avg)	111.30	6.26	100.00	99.64	99.11	98.35	97.68	96.77
85°C (Avg)	111.24	6.26	99.83	99.63	99.05	98.20	97.24	96.15
105°C (Avg)	112.54	6.25	99.67	99.23	98.61	97.79	96.76	95.47

Temp.	CIEu'	CIEv'	CCT	Chromaticity Shift($\Delta u'v'$)					
	Initial(0hr)			1000h	2000h	3000h	4000h	5000h	6000h
55°C (Avg)	0.2605	0.5321	2723	0.0012	0.0015	0.0019	0.0024	0.0028	0.0033
85°C (Avg)	0.2604	0.5321	2724	0.0012	0.0016	0.0020	0.0025	0.0029	0.0035
105°C (Avg)	0.2610	0.5322	2712	0.0012	0.0016	0.0021	0.0025	0.0031	0.0037

**Average Lumen Maintenance diagram**



Average Color Maintenance diagram

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**Attachment 1: Equipment List**

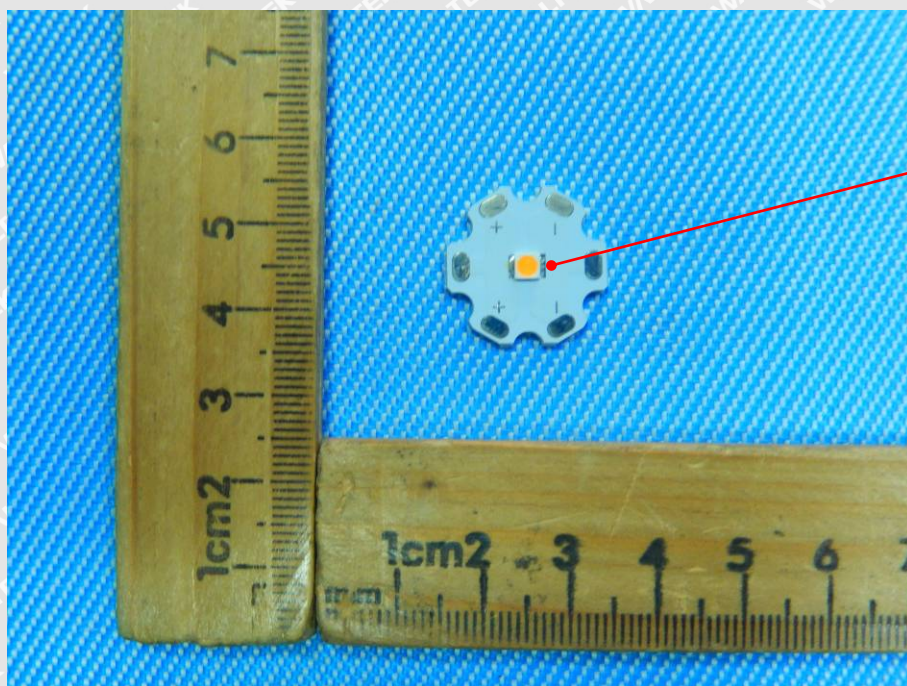
Equipment	Model	Calibration due date
The LED accelerated aging and longevity test system	EVERFINE LT-200A	2017-07-14
Temperature & Humidity Datalogger	Testo 608-H1	2018-03-08
High accuracy array spectroradio meter	EVERFINE HAAS-2000-VIS-V1	2018-03-08
Standard light source	EVERFINE D204	2018-03-08
DC power supply	EVERFINE WY12010	2018-03-08
Caliper	MITUTOYO CD-6"CS	2018-03-08



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Attachment 2: Photo document



===== End of Report =====

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