TEST REPORT

According to ANSI/IES LM-80-15
For

Xiamen Dacol Phototoelectronics Technology Co., Ltd.

No. 8021 Xiang'an West Road(Xiang'an) industrial zone, Torch Hi-Tech Industrial Development Zone , Xiamen City,Fujian,China

Model: SMD-2835

Report Type: 6000 Hours Test Report	**Product Type:** LED Package
Test Engineer:	Pote Wang
Report Number:	R2DG171116050-10
Test Date:	2017-11-21 to 2018-07-29
Report Date:	2018-08-07
Reviewed By:	Bill Xiong / EE Engineer
Test Facility:	Test facility was located at No.69,Pulongcun ,Puxinhu Industrial Area, Tangxia , Dongguan, Guangdong, China.
Prepared By:	Bay Area Compliance Laboratories Corp. (Dongguan). No.69,Pulongcun ,Puxinhu Industrial Area, Tangxia , Dongguan, Guangdong, China. Tel: +86-0769-86858888 Fax:+86-0769-86858588
Accreditation:	The IAS Accreditation Number TL-460.

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1 - General Information

1.1 Description of LED Light Sources

Sample Size:

75 PCS samples were received on 2017-11-16. The samples were numbered from 1 to 25, 26 to 50 and 51 to 75.

Manufacturer:	Xiamen Dacol Phototoelectronics Technology Co., Ltd.
Part Number:	SMD-2835
Part Type:	LED Package
Drive Level:	DC 30mA
Nominal CCT:	3000K
Power:	1.08W
Average Current Density per LED die:	107.64mA/mm^2
Average Power Density per LED die:	1.292W/mm^2
CRI:	80
Die Spacing:	0.1mm

Sampling Method:

LED samples for IESNA LM-80 testing consist of units built from a minimum of three manufacturing lots with each manufacturing lot built from different wafer lots built on non-consecutive days.
These manufacturing lots are picked to represent a wide parametric distribution.

1.2 Standards Used:

- ANSI/IES LM-80-15: IES Approved Method for Measuring Lumen Maintenance of LED Light Sources.
- CIE 127:2007: Measurement of LEDs
- ENERGY STAR® Requirements for the Use of LM-80 Data (This standard was not accredited by IAS)

1.3 Testing Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
0.3m integrating sphere	EVERFINE	Diameter 0.3m	1011119	2018-03-18	2019-03-18
Programmable Test Power for LEDs	EVERFINE	LED300E	1008002	2018-03-26	2019-03-26
High accuracy array spectroradiometer	EVERFINE	HAAS-2000	1012016T	2018-03-18	2019-03-18
Standard Light Source	EVERFINE	D062	1011064	2018-01-15	2019-01-15
Precision digital stabilized DC power supply	EVERFINE	WY605-V110	G115987CJ7321114	2018-03-26	2019-03-26
Multilayer aging machine	BACL	B2-270	20015	2018-03-13	2019-03-13
Digital CC&CV DC Power Supply	EVERFINE	WY5015	11090003	2018-05-04	2019-05-04

1.4 Drive Level

Samples are driven with a constant direct current (DC) during maintenance test, photometric and electrical measurement. The current value was regulated to within ±3% of the specified value of the manufacturer during maintenance test, and was within ±0.5% during photometric and electrical measurement test.

1.5 Ambient Conditions for Maintenance Test

For lumen maintenance test, samples within one data set, were installed on cooling boards in thermal chambers with minimal ambient airflow. The case temperature and ambient temperature was monitored by thermocouples which one was soldered to the coldest DUTs' case (TMP_{LED}) location, while the other is mounted at a distance of 5 mm above the TMP location.

During life testing, TMP_{LED} of the coldest LEDs were maintained at a temperature that was greater than or equal to 2°C below the corresponding nominal case temperature. Surrounding air was maintained at a temperature that was greater than or equal to 5°C below the corresponding nominal case temperature. Thermocouples were shielded from direct DUT optical radiation and comply with ASTM E230 Table 1 "Special Limits".

Samples were connected to DC power supply in series circuits with a constant current. The forward current was regulated to within ±3% of the specified value of the manufacturer.

The relative humidity within chamber was kept less than 65% during test.

For photometry measurement, the ambient temperature during test was set to 25°C ± 2°C, RH <65%.

1.6 Photometric Measurement Method and Uncertainty

Integrating sphere and spectroradiometer is used to measure luminous flux and chromaticity coordinate u'v'. 2π measurement was used and sample was drived by DC power supply. The forward current was regulated to within ±0.5% of the nominal value. The test system was calibrated by halogen reference lamp. The ambient temperature during test was set to 25°C ± 2°C, RH <65%. The temperature measurement point was located in the sphere and the temperature was detected by a temperature probe.

The uncertainty of the light output (luminous flux) measurements is U=1.6% (K=2), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is U=20K (K=2), at the 95% confidence level. The uncertainty of the CRI is U=1.6 (K=2) , at the 95% confidence level.

The uncertainty of the temperature is U=0.8671°C (K=2), at the 95% confidence level.

1.7 Statement of Traceability

Bay Area Compliance Laboratories Corp. (Dongguan) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

1.8 Sample Set

Data Set 1: 55°C, 30mA

Part Number:	SMD-2835
Number of Units:	25
Case Temperature:	>53°C
Ambient Temperature:	>50°C
Life Test Drive Current:	30mA
Measurement Current:	30mA

Data Set 2: 85°C, 30mA

Part Number:	SMD-2835
Number of Units:	25
Case Temperature:	>83°C
Ambient Temperature:	>80°C
Life Test Drive Current:	30mA
Measurement Current:	30mA

Data Set 3: 105°C, 30mA

Part Number:	SMD-2835
Number of Units:	25
Case Temperature:	>103°C
Ambient Temperature:	>100°C
Life Test Drive Current:	30mA
Measurement Current:	30mA

2 - Summary of Test Result

Data Set:	Sample Size	Failures Observed:	Test Interval	Test Duration	α	β	Reported TM-21 L_{70} Lifetime
1	25	0	1000hrs	6000hrs	3.662E-06	1.006	>36000
2	25	0	1000hrs	6000hrs	4.373E-06	1.005	>36000
3	25	0	1000hrs	6000hrs	5.139E-06	1.005	>36000

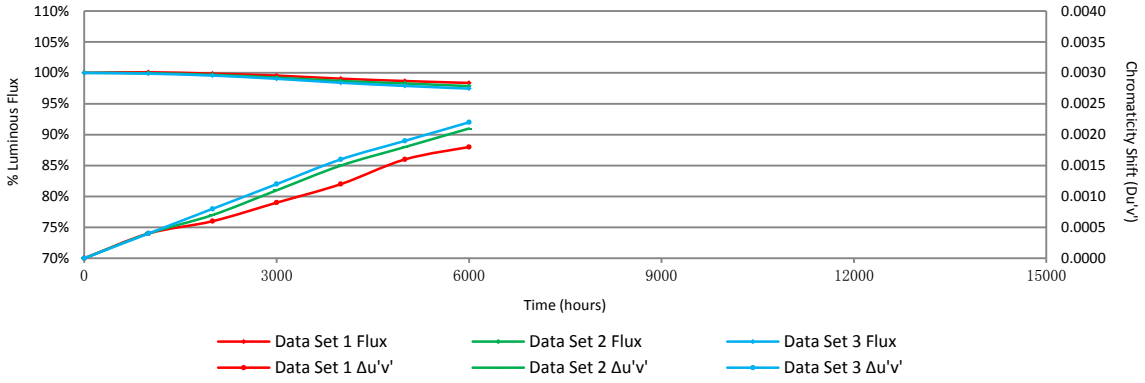
Average Lumen Maintenance (Percentage of Initial Luminous Flux)

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	100.10%	99.87%	99.56%	99.06%	98.68%	98.37%
2	99.94%	99.68%	99.23%	98.69%	98.28%	97.86%
3	99.87%	99.56%	99.04%	98.40%	97.89%	97.45%

Average Chromaticity Shift

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	0.0004	0.0006	0.0009	0.0012	0.0016	0.0018
2	0.0004	0.0007	0.0011	0.0015	0.0018	0.0021
3	0.0004	0.0008	0.0012	0.0016	0.0019	0.0022

Average Lumen Maintenance and Chromaticity Shift VS. Time



3 - Test Data

3.1 Data Set 1, 55°C, 30mA (Lumen Maintenance)

No.	Φ(lm)	Lumen Maintenance (%)					
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	110.30	100.09	99.91	99.73	99.37	99.18	98.82
2	110.70	100.18	100.09	99.73	99.19	98.92	98.55
3	110.60	100.18	99.82	99.55	99.01	98.55	98.28
4	111.60	99.91	99.64	99.28	98.75	98.39	98.30
5	110.30	100.18	99.91	99.73	99.27	98.91	98.55
6	111.30	100.27	100.18	99.91	99.73	99.28	99.10
7	110.40	100.27	99.91	99.55	99.00	98.82	98.64
8	110.60	100.18	100.09	99.91	99.28	98.82	98.46
9	110.30	99.91	99.73	99.46	98.82	98.46	98.19
10	110.50	100.09	99.91	99.64	99.10	98.82	98.37
11	110.50	100.09	99.82	99.46	99.19	98.64	98.55
12	109.80	100.18	99.82	99.54	99.09	98.54	98.00
13	109.50	100.09	99.91	99.54	99.09	98.63	98.17
14	109.40	100.09	99.73	99.45	99.09	98.81	98.63
15	111.60	99.91	99.73	99.64	99.19	98.92	98.66
16	109.80	100.09	99.91	99.54	99.00	98.63	98.36
17	109.30	100.09	99.73	99.45	99.09	98.72	98.44
18	109.10	99.91	99.54	99.18	98.63	98.08	97.62
19	108.30	99.82	99.63	99.26	98.71	98.34	97.88
20	108.80	100.09	99.82	99.54	98.71	98.25	97.89
21	109.20	99.91	99.63	99.36	98.81	98.35	97.99
22	110.40	100.36	100.09	99.73	99.00	98.46	98.10
23	109.40	100.09	99.82	99.45	99.18	98.90	98.63
24	108.70	100.18	100.09	99.72	99.08	98.80	98.53
25	110.40	100.27	100.18	99.64	99.28	98.73	98.55
Avg.	110.03	100.10	99.87	99.56	99.06	98.68	98.37
Med.	110.30	100.09	99.82	99.54	99.09	98.72	98.44
st dev	0.87	0.1384	0.1784	0.1844	0.2428	0.2836	0.3349
Min.	108.30	99.82	99.54	99.18	98.63	98.08	97.62
Max.	111.60	100.36	100.18	99.91	99.73	99.28	99.10

3.2 Data Set 1, 55°C, 30mA (Forward Voltage)

No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	36.27	36.27	36.45	36.28	36.28	36.57	36.86
2	36.15	36.14	36.29	36.13	36.12	36.37	36.62
3	36.29	36.19	36.26	36.10	36.07	36.41	36.73
4	36.51	36.49	37.07	36.48	36.48	36.75	37.04
5	36.21	36.17	36.36	36.19	36.16	36.46	36.72
6	36.19	36.16	36.35	36.18	36.18	36.43	36.68
7	36.46	36.35	36.63	36.36	36.37	36.64	36.95
8	36.19	36.16	36.35	36.17	36.37	36.41	36.66
9	36.18	36.16	36.35	36.16	36.16	36.45	36.69
10	36.12	36.10	36.26	36.10	36.11	36.34	36.59
11	36.43	36.39	36.58	36.38	36.38	36.70	36.98
12	36.37	36.36	36.91	36.35	36.34	36.64	36.90
13	36.08	36.03	36.25	36.04	36.18	36.37	36.54
14	36.08	36.05	36.23	36.06	36.07	36.34	36.58
15	36.30	36.13	36.32	36.13	36.13	36.57	36.68
16	36.40	36.08	36.36	36.08	36.08	36.38	36.62
17	36.16	36.14	36.34	36.19	36.15	36.44	36.67
18	36.27	36.09	36.35	36.09	36.09	36.38	36.61
19	36.08	36.05	36.25	36.04	36.06	36.32	36.57
20	36.13	36.10	36.31	36.09	36.09	36.38	36.66
21	36.09	36.11	36.34	36.12	36.19	36.46	36.68
22	36.11	36.07	36.29	36.09	36.09	36.37	36.61
23	36.10	36.10	36.26	36.07	36.08	36.35	36.58
24	36.33	36.33	36.52	36.32	36.32	36.67	36.90
25	36.33	36.36	36.50	36.30	36.28	36.62	36.88
Avg.	36.23	36.18	36.41	36.18	36.19	36.47	36.72
Med.	36.19	36.14	36.35	36.13	36.16	36.43	36.68
st dev	0.13	0.13	0.21	0.12	0.12	0.13	0.14
Min.	36.08	36.03	36.23	36.04	36.06	36.32	36.54
Max.	36.51	36.49	37.07	36.48	36.48	36.75	37.04

3.3 Data Set 1, 55°C, 30mA (Chromaticity Shift)

No.	u'	v'	CCT(K)	Chromaticity Shift (Δu'v')					
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	0.2500	0.5188	3031	0.0003	0.0005	0.0008	0.0011	0.0014	0.0017
2	0.2493	0.5176	3056	0.0002	0.0006	0.0008	0.0011	0.0017	0.0017
3	0.2503	0.5186	3024	0.0004	0.0006	0.0009	0.0012	0.0019	0.0019
4	0.2491	0.5170	3066	0.0004	0.0006	0.0009	0.0013	0.0018	0.0020
5	0.2498	0.5179	3043	0.0004	0.0006	0.0009	0.0013	0.0015	0.0019
6	0.2486	0.5181	3070	0.0004	0.0006	0.0008	0.0011	0.0015	0.0019
7	0.2488	0.5171	3075	0.0003	0.0005	0.0010	0.0013	0.0015	0.0017
8	0.2504	0.5183	3025	0.0005	0.0006	0.0009	0.0013	0.0016	0.0020
9	0.2501	0.5179	3034	0.0004	0.0005	0.0009	0.0012	0.0014	0.0015
10	0.2497	0.5168	3052	0.0003	0.0006	0.0008	0.0011	0.0014	0.0019
11	0.2498	0.5179	3042	0.0004	0.0005	0.0009	0.0011	0.0014	0.0014
12	0.2503	0.5160	3044	0.0004	0.0006	0.0010	0.0013	0.0016	0.0018
13	0.2497	0.5183	3043	0.0003	0.0005	0.0009	0.0012	0.0015	0.0015
14	0.2488	0.5168	3076	0.0004	0.0007	0.0009	0.0013	0.0016	0.0016
15	0.2481	0.5175	3089	0.0004	0.0006	0.0009	0.0013	0.0017	0.0016
16	0.2482	0.5179	3082	0.0004	0.0006	0.0009	0.0012	0.0014	0.0017
17	0.2499	0.5183	3036	0.0004	0.0008	0.0010	0.0014	0.0019	0.0021
18	0.2507	0.5181	3018	0.0004	0.0005	0.0009	0.0013	0.0015	0.0016
19	0.2497	0.5178	3046	0.0003	0.0006	0.0009	0.0013	0.0014	0.0017
20	0.2491	0.5173	3064	0.0004	0.0006	0.0009	0.0013	0.0016	0.0017
21	0.2504	0.5183	3025	0.0002	0.0009	0.0010	0.0012	0.0017	0.0019
22	0.2515	0.5197	2987	0.0004	0.0005	0.0009	0.0012	0.0015	0.0016
23	0.2506	0.5172	3027	0.0003	0.0005	0.0009	0.0014	0.0016	0.0017
24	0.2489	0.5172	3070	0.0004	0.0006	0.0010	0.0013	0.0016	0.0018
25	0.2493	0.5179	3055	0.0002	0.0005	0.0009	0.0013	0.0016	0.0018
Avg.	0.2496	0.5178	3047	0.0004	0.0006	0.0009	0.0012	0.0016	0.0018
Med.	0.2497	0.5179	3044	0.0004	0.0006	0.0009	0.0013	0.0016	0.0017
st dev	0.0008	0.0008	24	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002
Min.	0.2481	0.5160	2987	0.0002	0.0005	0.0008	0.0011	0.0014	0.0014
Max.	0.2515	0.5197	3089	0.0005	0.0009	0.0010	0.0014	0.0019	0.0021

3.4 Data Set 2, 85°C, 30mA (Lumen Maintenance)

No.	Φ(lm)	Lumen Maintenance (%)					
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
26	108.30	100.18	99.82	99.26	98.61	98.25	97.69
27	109.70	99.82	99.45	99.18	98.45	97.99	97.45
28	109.90	99.91	99.73	99.36	99.18	98.82	98.64
29	111.10	100.09	99.82	99.28	98.92	98.65	98.20
30	110.40	99.73	99.46	99.09	98.37	98.01	97.74
31	110.80	99.91	99.82	99.55	99.01	98.65	98.56
32	109.50	100.18	99.91	99.54	99.09	98.63	98.36
33	109.40	99.91	99.63	99.09	98.90	98.45	98.08
34	109.20	100.09	99.91	99.36	98.53	98.35	97.80
35	108.80	99.91	99.72	99.36	98.90	98.53	97.98
36	110.40	99.82	99.55	99.09	98.55	98.10	97.64
37	110.80	99.82	99.73	99.19	98.83	98.38	97.74
38	109.80	100.09	99.82	99.36	98.91	98.45	98.27
39	110.50	100.09	99.73	99.28	98.55	98.37	97.92
40	110.80	99.91	99.64	99.46	98.83	98.38	98.01
41	109.70	99.91	99.73	99.45	99.00	98.45	97.81
42	109.90	99.82	99.45	99.00	98.27	97.73	97.36
43	109.20	99.82	99.63	98.99	98.44	98.17	97.62
44	110.10	100.09	99.73	99.18	98.46	97.91	97.55
45	110.20	99.73	99.46	98.82	98.37	97.91	97.55
46	111.00	100.09	99.82	99.19	98.65	98.38	97.93
47	111.90	99.91	99.55	99.20	98.48	97.86	97.41
48	111.70	99.91	99.64	99.02	98.57	98.21	97.58
49	109.60	99.73	99.54	99.00	98.27	97.81	97.45
50	112.20	100.09	99.82	99.47	99.02	98.57	98.22
Avg.	110.20	99.94	99.68	99.23	98.69	98.28	97.86
Med.	110.10	99.91	99.73	99.20	98.61	98.37	97.80
st dev	0.95	0.1435	0.1438	0.1910	0.2732	0.2990	0.3576
Min.	108.30	99.73	99.45	98.82	98.27	97.73	97.36
Max.	112.20	100.18	99.91	99.55	99.18	98.82	98.64

3.5 Data Set 2, 85°C, 30mA (Forward Voltage)

No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
26	36.12	36.12	36.66	36.11	36.09	36.35	36.59
27	36.27	36.15	36.30	36.13	36.11	36.42	36.60
28	36.40	36.39	36.55	36.36	36.36	36.67	36.91
29	36.13	36.15	36.78	36.12	36.12	36.38	36.59
30	36.30	36.31	36.47	36.29	36.27	36.56	36.80
31	36.31	36.05	36.21	36.04	36.03	36.31	36.57
32	36.17	36.16	36.32	36.14	36.13	36.44	36.67
33	36.19	36.15	36.72	36.15	36.12	36.42	36.66
34	36.31	36.10	36.28	36.11	36.08	36.37	36.64
35	36.16	36.06	36.24	36.06	36.05	36.36	36.60
36	36.12	36.09	36.28	36.10	36.09	36.36	36.61
37	36.16	36.11	36.31	36.11	36.09	36.44	36.62
38	36.14	36.09	36.26	36.10	36.08	36.34	36.61
39	36.37	36.18	36.37	36.22	36.16	36.65	36.81
40	36.13	36.11	36.30	36.10	36.10	36.36	36.61
41	36.15	36.13	36.19	36.13	36.11	36.37	36.63
42	36.29	36.25	36.45	36.24	36.23	36.69	36.86
43	36.08	36.06	36.59	36.08	36.05	36.35	36.55
44	36.29	36.08	36.27	36.10	36.08	36.37	36.61
45	36.16	36.12	36.53	36.13	36.14	36.39	36.59
46	36.27	36.14	36.31	36.15	36.14	36.41	36.64
47	36.20	36.17	36.51	36.21	36.17	36.44	36.64
48	36.45	36.41	36.61	36.42	36.39	36.75	36.97
49	36.14	36.08	36.17	36.08	36.07	36.36	36.58
50	36.30	36.27	36.46	36.25	36.25	36.60	36.82
Avg.	36.22	36.16	36.41	36.16	36.14	36.45	36.67
Med.	36.19	36.13	36.32	36.13	36.11	36.39	36.62
st dev	0.10	0.10	0.17	0.09	0.09	0.13	0.12
Min.	36.08	36.05	36.17	36.04	36.03	36.31	36.55
Max.	36.45	36.41	36.78	36.42	36.39	36.75	36.97

3.6 Data Set 2, 85°C, 30mA (Chromaticity Shift)

No.	u'	v'	CCT(K)	Chromaticity Shift (Δu'v')					
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
26	0.2490	0.5183	3060	0.0002	0.0007	0.0009	0.0014	0.0018	0.0020
27	0.2489	0.5178	3065	0.0004	0.0006	0.0008	0.0011	0.0015	0.0015
28	0.2507	0.5183	3016	0.0002	0.0007	0.0011	0.0015	0.0019	0.0020
29	0.2491	0.5194	3049	0.0004	0.0007	0.0012	0.0015	0.0018	0.0020
30	0.2500	0.5176	3039	0.0005	0.0009	0.0013	0.0017	0.0020	0.0022
31	0.2497	0.5187	3039	0.0006	0.0009	0.0013	0.0016	0.0019	0.0019
32	0.2489	0.5155	3082	0.0005	0.0009	0.0013	0.0016	0.0019	0.0020
33	0.2497	0.5163	3056	0.0004	0.0007	0.0011	0.0016	0.0019	0.0021
34	0.2507	0.5190	3012	0.0002	0.0007	0.0011	0.0014	0.0018	0.0021
35	0.2494	0.5186	3046	0.0003	0.0007	0.0009	0.0015	0.0017	0.0020
36	0.2503	0.5182	3027	0.0004	0.0008	0.0010	0.0014	0.0018	0.0021
37	0.2483	0.5164	3092	0.0004	0.0008	0.0012	0.0020	0.0020	0.0024
38	0.2495	0.5174	3054	0.0004	0.0007	0.0011	0.0015	0.0018	0.0021
39	0.2483	0.5171	3087	0.0002	0.0008	0.0011	0.0016	0.0019	0.0021
40	0.2497	0.5172	3050	0.0005	0.0006	0.0011	0.0016	0.0017	0.0022
41	0.2495	0.5159	3064	0.0005	0.0007	0.0012	0.0016	0.0019	0.0022
42	0.2490	0.5178	3064	0.0004	0.0005	0.0011	0.0015	0.0018	0.0021
43	0.2493	0.5175	3058	0.0005	0.0006	0.0011	0.0015	0.0018	0.0021
44	0.2501	0.5181	3033	0.0004	0.0007	0.0011	0.0014	0.0018	0.0020
45	0.2507	0.5178	3021	0.0006	0.0007	0.0011	0.0014	0.0020	0.0023
46	0.2502	0.5191	3023	0.0002	0.0007	0.0008	0.0013	0.0018	0.0022
47	0.2490	0.5170	3070	0.0004	0.0006	0.0010	0.0015	0.0019	0.0021
48	0.2483	0.5179	3079	0.0003	0.0006	0.0011	0.0013	0.0017	0.0020
49	0.2507	0.5183	3015	0.0003	0.0006	0.0011	0.0014	0.0016	0.0020
50	0.2484	0.5173	3082	0.0004	0.0007	0.0012	0.0016	0.0018	0.0021
Avg.	0.2495	0.5177	3051	0.0004	0.0007	0.0011	0.0015	0.0018	0.0021
Med.	0.2495	0.5178	3054	0.0004	0.0007	0.0011	0.0015	0.0018	0.0021
st dev	0.0008	0.0010	24	0.0001	0.0001	0.0001	0.0002	0.0001	0.0002
Min.	0.2483	0.5155	3012	0.0002	0.0005	0.0008	0.0011	0.0015	0.0015
Max.	0.2507	0.5194	3092	0.0006	0.0009	0.0013	0.0020	0.0020	0.0024

3.7 Data Set 3, 105°C, 30mA (Lumen Maintenance)

No.	Φ(lm)	Lumen Maintenance (%)					
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
51	109.50	99.63	99.27	98.72	97.99	97.35	96.89
52	109.90	99.91	99.45	99.00	98.09	97.63	97.00
53	110.90	100.18	99.82	99.28	98.65	98.29	97.93
54	111.20	99.91	99.64	99.37	98.65	98.20	98.02
55	110.40	99.73	99.46	98.82	98.28	97.64	97.37
56	110.60	99.82	99.37	98.82	98.37	97.92	97.74
57	110.70	99.91	99.64	99.10	98.28	97.92	97.29
58	110.60	99.82	99.46	98.82	98.28	97.74	97.11
59	109.60	99.82	99.54	99.18	98.08	97.54	96.99
60	110.20	99.82	99.64	99.09	98.28	97.82	97.64
61	110.00	99.82	99.73	99.00	98.18	97.82	97.73
62	109.30	99.91	99.63	99.18	98.72	98.17	97.71
63	111.00	99.91	99.55	99.10	98.47	98.20	97.66
64	110.30	99.82	99.73	99.09	98.37	97.73	97.46
65	110.30	99.64	99.27	98.82	98.37	97.91	97.37
66	110.10	99.91	99.64	99.18	98.64	97.91	97.28
67	109.40	99.82	99.63	99.09	98.90	98.26	97.62
68	111.00	99.91	99.64	99.10	98.56	97.84	97.48
69	110.90	99.91	99.46	99.10	98.56	98.11	97.66
70	111.60	100.09	99.73	99.10	98.48	98.03	97.49
71	111.70	99.91	99.55	98.93	98.57	98.03	97.58
72	109.60	100.09	99.64	99.27	98.54	97.90	97.72
73	109.50	99.82	99.63	99.00	98.36	97.81	96.99
74	110.30	99.73	99.55	98.91	98.55	98.28	97.73
75	111.10	99.82	99.37	98.83	97.75	97.21	96.85
Avg.	110.39	99.87	99.56	99.04	98.40	97.89	97.45
Med.	110.30	99.82	99.63	99.09	98.37	97.91	97.49
st dev	0.69	0.1260	0.1426	0.1672	0.2552	0.2796	0.3288
Min.	109.30	99.63	99.27	98.72	97.75	97.21	96.85
Max.	111.70	100.18	99.82	99.37	98.90	98.29	98.02

3.8 Data Set 3, 105°C, 30mA (Forward Voltage)

No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
51	36.31	36.26	36.53	36.28	36.27	36.60	36.82
52	36.14	36.10	36.89	36.12	36.11	36.39	36.61
53	36.34	36.31	36.52	36.33	36.32	36.61	36.85
54	36.27	36.25	36.56	36.49	36.26	36.54	36.78
55	36.15	36.11	36.30	36.13	36.13	36.38	36.59
56	36.33	36.29	36.49	36.33	36.31	36.60	36.86
57	36.23	36.17	36.36	36.18	36.18	36.48	36.72
58	36.13	36.09	36.27	36.09	36.07	36.34	36.57
59	36.09	36.04	36.26	36.07	36.04	36.32	36.57
60	36.18	36.12	36.35	36.23	36.12	36.41	36.66
61	36.23	36.06	37.10	36.08	36.14	36.41	36.58
62	36.12	36.08	36.28	36.21	36.08	36.48	36.60
63	36.13	36.09	36.28	36.11	36.09	36.38	36.61
64	36.36	36.40	36.49	36.35	36.26	36.56	36.85
65	36.14	36.10	36.30	36.16	36.09	36.36	36.59
66	36.25	36.09	36.24	36.15	36.09	36.40	36.61
67	36.16	36.10	36.71	36.16	36.11	36.35	36.59
68	36.19	36.10	36.36	36.16	36.08	36.35	36.60
69	36.14	36.12	36.52	36.17	36.13	36.38	36.66
70	36.41	36.35	36.62	36.44	36.36	36.66	36.91
71	36.29	36.24	36.45	36.30	36.23	36.59	36.82
72	36.08	36.04	36.58	36.11	36.04	36.33	36.56
73	36.12	36.07	36.29	36.14	36.08	36.34	36.56
74	36.11	36.06	36.28	36.13	36.06	36.34	36.56
75	36.24	36.18	36.40	36.27	36.16	36.44	36.69
Avg.	36.21	36.15	36.46	36.21	36.15	36.44	36.67
Med.	36.18	36.10	36.40	36.16	36.12	36.40	36.61
st dev	0.09	0.10	0.21	0.11	0.09	0.11	0.12
Min.	36.08	36.04	36.24	36.07	36.04	36.32	36.56
Max.	36.41	36.40	37.10	36.49	36.36	36.66	36.91

3.9 Data Set 3, 105°C, 30mA (Chromaticity Shift)

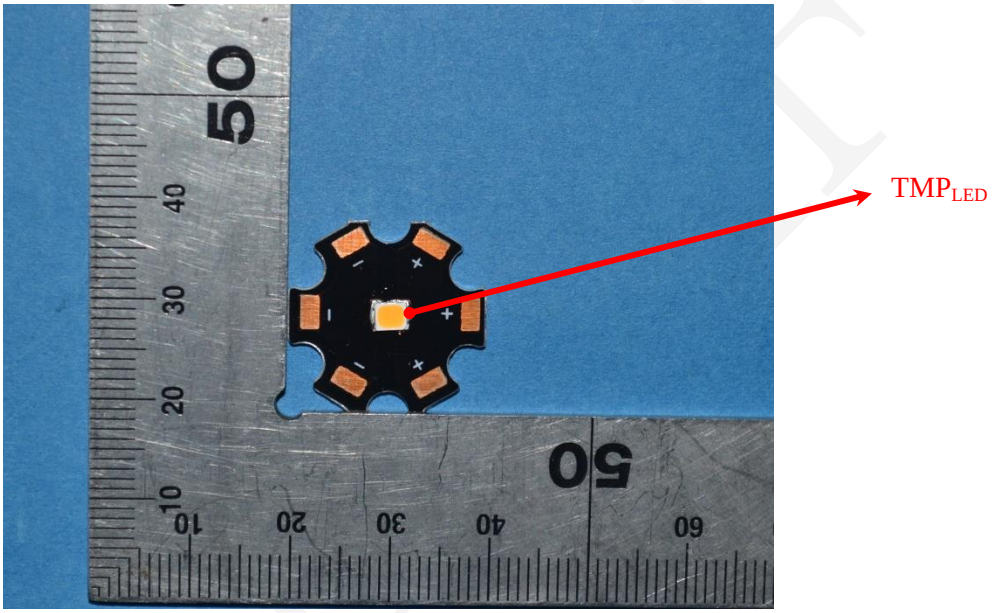
No.	u'	v'	CCT(K)	Chromaticity Shift (Δu'v')					
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
51	0.2490	0.5169	3069	0.0004	0.0007	0.0013	0.0016	0.0018	0.0021
52	0.2509	0.5182	3012	0.0004	0.0008	0.0013	0.0016	0.0019	0.0022
53	0.2489	0.5168	3074	0.0004	0.0007	0.0011	0.0016	0.0018	0.0021
54	0.2497	0.5185	3042	0.0006	0.0009	0.0013	0.0016	0.0019	0.0022
55	0.2520	0.5192	2977	0.0004	0.0008	0.0013	0.0015	0.0020	0.0022
56	0.2507	0.5189	3013	0.0004	0.0008	0.0012	0.0016	0.0020	0.0024
57	0.2494	0.5156	3068	0.0004	0.0009	0.0014	0.0016	0.0020	0.0022
58	0.2485	0.5200	3061	0.0004	0.0008	0.0012	0.0016	0.0020	0.0021
59	0.2520	0.5193	2977	0.0006	0.0008	0.0014	0.0017	0.0020	0.0022
60	0.2496	0.5179	3047	0.0004	0.0007	0.0013	0.0016	0.0019	0.0023
61	0.2492	0.5192	3048	0.0004	0.0008	0.0012	0.0017	0.0019	0.0021
62	0.2491	0.5164	3071	0.0005	0.0009	0.0013	0.0017	0.0020	0.0021
63	0.2499	0.5180	3038	0.0004	0.0008	0.0012	0.0016	0.0020	0.0020
64	0.2482	0.5163	3094	0.0004	0.0008	0.0011	0.0018	0.0020	0.0021
65	0.2490	0.5163	3075	0.0006	0.0008	0.0011	0.0017	0.0019	0.0023
66	0.2491	0.5177	3062	0.0005	0.0008	0.0011	0.0018	0.0019	0.0024
67	0.2507	0.5189	3012	0.0004	0.0008	0.0010	0.0015	0.0021	0.0022
68	0.2481	0.5185	3082	0.0004	0.0008	0.0011	0.0016	0.0021	0.0022
69	0.2505	0.5182	3021	0.0004	0.0008	0.0010	0.0016	0.0018	0.0021
70	0.2481	0.5167	3096	0.0004	0.0008	0.0012	0.0016	0.0019	0.0022
71	0.2489	0.5193	3057	0.0005	0.0009	0.0012	0.0017	0.0019	0.0022
72	0.2486	0.5173	3077	0.0003	0.0008	0.0011	0.0016	0.0019	0.0020
73	0.2507	0.5171	3024	0.0004	0.0008	0.0011	0.0018	0.0021	0.0023
74	0.2510	0.5195	3002	0.0003	0.0007	0.0011	0.0017	0.0020	0.0022
75	0.2491	0.5177	3060	0.0004	0.0007	0.0011	0.0017	0.0019	0.0021
Avg.	0.2496	0.5179	3046	0.0004	0.0008	0.0012	0.0016	0.0019	0.0022
Med.	0.2492	0.5180	3057	0.0004	0.0008	0.0012	0.0016	0.0019	0.0022
st dev	0.0011	0.0012	34	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Min.	0.2481	0.5156	2977	0.0003	0.0007	0.0010	0.0015	0.0018	0.0020
Max.	0.2520	0.5200	3096	0.0006	0.0009	0.0014	0.0018	0.0021	0.0024

4 - DUT Photo

4.1 Mechanical Dimensions

All dimensions are in millimeter

4.2 DUT Photo



**********END OF REPORT**********