TEST REPORT

According to ANSI/IES LM-80-15
For

HongliZhihui Group Co.,Ltd. Guangzhou Branch

Room 316, Building 2, No.1, Xianke Yi Road, Huadong Town, Huadu District, Guangzhou, China

Model:A2835W1H2-D01-7D2AA1

Report Type: 6000 Hours Test Report	**Product Type:** LED Package
Test Engineer:	Pote Wang
Report Number:	RSZ180319504-10
Test Date:	2018-04-05 to 2018-12-15
Report Date:	2018-12-25
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 NumberTL-460.

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1 - General Information

1.1 Description of LED Light Sources

Sample Size:

60 PCS samples were received on 2018-03-19. The samples were numbered from 1 to 30 and 31 to 60.

Manufacturer:	HongliZhihui Group Co.,Ltd. Guangzhou Branch
Part Number:	A2835W1H2-D01-7D2AA1
Part Type:	LED Package
Drive Level:	DC 80mA
Nominal CCT:	2700K
Power:	0.256W
Average Current Density per LED die:	968.75mA/mm^2
Average Power Density per LED die:	3.10W/mm^2
CRI:	70
Die Spacing:	N/A

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.

Family products covered by this report:

According to *ENERGY STAR® Requirements for the Use of LM-80 Data*, the following products can be covered by this report base on the information and declaration provided by manufacturer. The information of these models shows that the covered products meet all section 4 requirements of *ENERGY STAR® Requirements for the Use of LM-80 Data* (September 28, 2017)

This report covers the following models:

Testing Model	Multiple Models	Differences Details
A2835W1H2-D01-7D2AA1	HL- A-2835HW-S1-08HL-HR1(DT)	Only different Model name for different market
	HL- AM-2835HW-S1-08HL-HR1	
	HL- AM-2835HW-S1-08HL-HR1-DT	
	SL-*Z2835FAB-11CA*	
	SL-*Z2835FAA-11CA*	
	SL-*Z2835FAH-11CA*	
	SL-*Z2835FAB-11CA*H	
	SL-*Z2835FAA-11CA*H	
	SL-*Z2835FAH-11CA*H	
	SL-*Z2835FAB-11DA*	
	SL-*Z2835FAA-11DA*	
	SL-*Z2835FAH-11DA*	
	SL-*Z2835FAB-11DA*H	
	SL-*Z2835FAA-11DA*H	
	SL-*Z2835FAH-11DA*H	
	SL-**Z2835FTA-11CA***C-APH***	
	SL-**Z2835FAA-11CA***C-APH***	
	SL-**Z2835FAB-11CA***C-APH***	

Note:
Multiple modelSL-*Z2835FAB-11CA*, and so on, the first symbol "*"is the letter I /N /W which stand for color temperature (I means 2200-3700K, N means 3700-4700K, W meansabove4700K), the second * is a different product solution (color coordinate and applica tions and special solution etc…)

Multiple model SL-**Z2835FTA-11CA***C-APH***/SL-**Z2835FAA-11CA***C-APH***/SL-**Z2835FAB-11CA***C-APH***, the first symbol "**"designates nominal CCT(22=2200K,27=2700K,30=3000K,35=3500K,40=4000K,50=5000K,57=5700K,65=6500K),
The middle symbol"***"designates nominal different solution (color coordinate and applications and special solution etc…), thelast symbol"****"designates version numbers, Use 001 002 003 … expression.

1.2 Standards and Reference Documentations

- 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	20024	2018-03-13	2019-03-13
Digital CC&CV DC Power Supply	EVERFINE	WY5015	11090007	2018-03-26	2019-03-26
Digital CC&CV DC Power Supply	EVERFINE	WY5015	11090004	2018-03-26	2019-03-26

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, 80mA

Part Number:	A2835W1H2-D01-7D2AA1
Number of Units:	30
Case Temperature:	>53°C
Ambient Temperature:	>50°C
Life Test Drive Current:	80mA
Measurement Current:	80mA

Data Set 2: 85°C, 80mA

Part Number:	A2835W1H2-D01-7D2AA1
Number of Units:	30
Case Temperature:	>83°C
Ambient Temperature:	>80°C
Life Test Drive Current:	80mA
Measurement Current:	80mA

2 - Summary of Test Result

Data Set:	Sample Size	Failures Observed:	Test Interval	Test Duration	α	β	Reported TM-21 L_{70} Lifetime
1	30	0	1000hrs	6000hrs	3.143E-06	1.005	>36000 hours
2	30	0	1000hrs	6000hrs	3.933E-06	1.004	>36000 hours

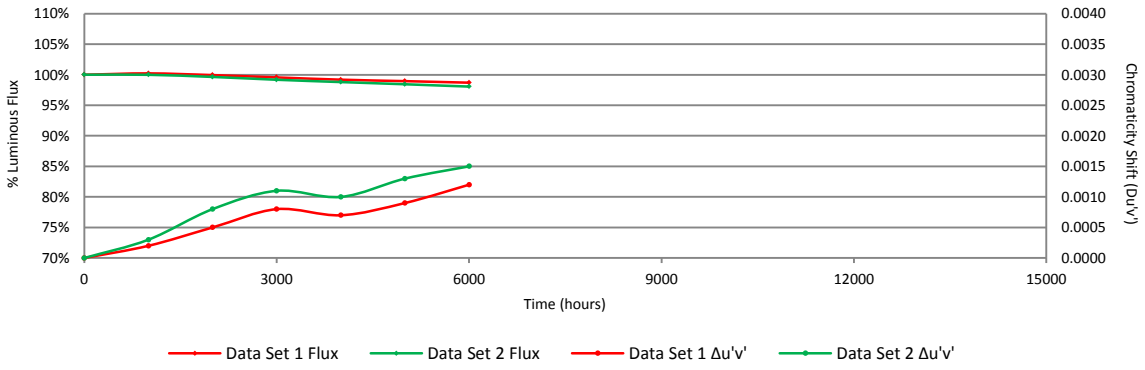
Average Lumen Maintenance (Percentage of Initial Luminous Flux)

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	100.22%	99.94%	99.56%	99.19%	98.95%	98.70%
2	99.99%	99.64%	99.18%	98.80%	98.44%	98.06%

Average Chromaticity Shift

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	0.0002	0.0005	0.0008	0.0007	0.0009	0.0012
2	0.0003	0.0008	0.0011	0.0010	0.0013	0.0015

Average Lumen Maintenance and Chromaticity Shift VS. Time



3 - Test Data

3.1 Data Set 1, 55°C, 80mA(Lumen Maintenance)

No.	Φ(lm)	Lumen Maintenance (%)					
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	36.00	100.31	100.14	99.83	99.58	99.44	98.94
2	36.08	100.19	99.83	99.75	99.14	98.81	98.53
3	36.30	100.33	100.17	99.70	99.23	98.95	98.76
4	36.16	100.25	100.06	99.86	99.39	98.95	98.73
5	35.89	100.28	99.92	99.47	99.16	98.80	98.69
6	35.88	100.06	99.75	99.08	98.83	98.66	98.41
7	35.69	100.28	100.22	99.80	99.41	99.16	98.85
8	36.02	100.25	100.06	99.72	99.61	99.28	98.89
9	36.02	100.08	99.86	99.81	99.25	99.19	98.95
10	35.10	100.28	100.11	99.94	99.43	99.00	98.92
11	35.79	100.08	99.78	99.30	99.22	99.02	98.83
12	35.98	100.17	99.75	99.36	98.92	98.72	98.42
13	36.09	100.25	99.86	99.50	98.84	98.70	98.23
14	35.82	100.31	99.92	99.69	99.16	98.77	98.49
15	35.93	100.22	100.08	99.92	99.58	99.28	98.94
16	35.84	100.25	99.94	99.64	99.19	98.94	98.60
17	35.91	100.28	99.92	99.61	99.11	98.94	98.72
18	35.76	100.14	99.89	99.69	99.47	99.33	99.02
19	35.58	100.11	99.75	99.16	98.79	98.40	98.26
20	35.72	100.28	100.14	99.58	99.36	99.30	99.10
21	35.95	100.17	99.86	99.17	98.80	98.78	98.69
22	35.82	100.14	99.75	99.02	98.74	98.58	98.30
23	35.86	100.03	99.69	99.50	99.05	98.58	98.19
24	35.47	100.25	99.89	99.46	98.84	98.48	98.25
25	35.92	100.11	99.72	99.25	98.66	98.58	98.47
26	36.18	100.28	99.94	99.56	99.47	99.34	99.06
27	35.50	100.25	99.83	99.75	99.38	98.99	98.87
28	35.80	100.31	100.14	99.86	99.53	99.44	99.08
29	36.09	100.30	100.11	99.47	99.31	99.17	98.97
30	35.84	100.28	100.03	99.41	99.19	98.83	98.80
Avg.	35.87	100.22	99.94	99.56	99.19	98.95	98.70
Med.	35.89	100.25	99.92	99.60	99.20	98.95	98.74
st dev	0.24	0.09	0.15	0.26	0.28	0.30	0.28
Min.	35.10	100.03	99.69	99.02	98.66	98.40	98.19
Max.	36.30	100.33	100.22	99.94	99.61	99.44	99.10

3.2 Data Set 1, 55°C, 80mA (Forward Voltage)

No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	3.212	3.201	3.192	3.158	3.185	3.183	3.191
2	3.210	3.185	3.189	3.159	3.166	3.251	3.217
3	3.193	3.181	3.192	3.158	3.167	3.196	3.195
4	3.226	3.219	3.214	3.198	3.203	3.207	3.221
5	3.212	3.209	3.210	3.186	3.194	3.219	3.202
6	3.202	3.207	3.214	3.182	3.183	3.234	3.203
7	3.193	3.192	3.191	3.172	3.177	3.202	3.208
8	3.180	3.181	3.179	3.155	3.159	3.184	3.182
9	3.183	3.188	3.193	3.161	3.171	3.199	3.196
10	3.208	3.210	3.213	3.189	3.193	3.240	3.190
11	3.173	3.179	3.183	3.154	3.161	3.183	3.170
12	3.199	3.202	3.213	3.181	3.189	3.219	3.211
13	3.185	3.192	3.189	3.166	3.171	3.210	3.206
14	3.184	3.186	3.187	3.165	3.172	3.197	3.192
15	3.204	3.208	3.208	3.186	3.195	3.218	3.198
16	3.200	3.203	3.204	3.182	3.192	3.238	3.197
17	3.178	3.184	3.182	3.160	3.167	3.188	3.187
18	3.206	3.214	3.207	3.192	3.200	3.216	3.203
19	3.191	3.195	3.195	3.176	3.185	3.210	3.198
20	3.192	3.193	3.193	3.176	3.185	3.202	3.196
21	3.202	3.203	3.208	3.188	3.197	3.214	3.192
22	3.182	3.182	3.189	3.164	3.174	3.206	3.189
23	3.189	3.188	3.193	3.169	3.179	3.211	3.186
24	3.202	3.208	3.209	3.189	3.198	3.203	3.193
25	3.203	3.208	3.215	3.190	3.200	3.216	3.205
26	3.170	3.172	3.174	3.149	3.159	3.182	3.179
27	3.153	3.156	3.170	3.131	3.145	3.160	3.181
28	3.183	3.184	3.224	3.166	3.176	3.219	3.166
29	3.167	3.168	3.185	3.148	3.158	3.176	3.168
30	3.183	3.186	3.192	3.167	3.177	3.220	3.185
Avg.	3.192	3.193	3.197	3.171	3.179	3.207	3.194
Med.	3.193	3.192	3.193	3.168	3.178	3.209	3.194
st dev	0.016	0.015	0.014	0.016	0.015	0.020	0.013
Min.	3.153	3.156	3.170	3.131	3.145	3.160	3.166
Max.	3.226	3.219	3.224	3.198	3.203	3.251	3.221

3.3 Data Set 1, 55°C, 80mA(Chromaticity Shift)

No.	u'	v'	CCT(K)	Chromaticity Shift (Δu'v')					
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	0.2613	0.5224	2745	0.0002	0.0004	0.0007	0.0007	0.0010	0.0013
2	0.2593	0.5202	2802	0.0003	0.0005	0.0007	0.0009	0.0005	0.0008
3	0.2597	0.5217	2785	0.0002	0.0006	0.0005	0.0009	0.0015	0.0017
4	0.2600	0.5220	2777	0.0002	0.0004	0.0006	0.0007	0.0010	0.0015
5	0.2612	0.5208	2755	0.0001	0.0005	0.0008	0.0008	0.0010	0.0010
6	0.2604	0.5221	2768	0.0002	0.0007	0.0008	0.0013	0.0007	0.0010
7	0.2613	0.5220	2748	0.0002	0.0005	0.0004	0.0008	0.0005	0.0010
8	0.2609	0.5224	2755	0.0002	0.0005	0.0006	0.0007	0.0004	0.0009
9	0.2592	0.5219	2795	0.0001	0.0004	0.0006	0.0008	0.0006	0.0008
10	0.2611	0.5213	2756	0.0002	0.0004	0.0005	0.0006	0.0005	0.0009
11	0.2609	0.5232	2751	0.0001	0.0005	0.0004	0.0009	0.0005	0.0009
12	0.2597	0.5219	2784	0.0002	0.0004	0.0011	0.0010	0.0007	0.0009
13	0.2588	0.5209	2809	0.0002	0.0006	0.0009	0.0002	0.0004	0.0010
14	0.2589	0.5184	2819	0.0003	0.0006	0.0009	0.0006	0.0004	0.0010
15	0.2596	0.5217	2787	0.0001	0.0004	0.0010	0.0005	0.0009	0.0010
16	0.2605	0.5231	2761	0.0002	0.0006	0.0012	0.0004	0.0016	0.0010
17	0.2602	0.5227	2768	0.0002	0.0006	0.0004	0.0004	0.0016	0.0011
18	0.2599	0.5196	2791	0.0002	0.0006	0.0011	0.0008	0.0015	0.0017
19	0.2603	0.5225	2769	0.0002	0.0005	0.0009	0.0005	0.0015	0.0015
20	0.2600	0.5208	2781	0.0001	0.0002	0.0004	0.0006	0.0015	0.0016
21	0.2599	0.5218	2779	0.0002	0.0005	0.0006	0.0009	0.0015	0.0016
22	0.2613	0.5217	2749	0.0001	0.0005	0.0008	0.0010	0.0013	0.0015
23	0.2609	0.5228	2754	0.0002	0.0005	0.0009	0.0009	0.0015	0.0018
24	0.2592	0.5210	2800	0.0003	0.0007	0.0011	0.0002	0.0005	0.0011
25	0.2582	0.5208	2822	0.0003	0.0005	0.0011	0.0008	0.0005	0.0010
26	0.2597	0.5214	2786	0.0003	0.0006	0.0012	0.0004	0.0004	0.0010
27	0.2609	0.5228	2753	0.0002	0.0007	0.0012	0.0003	0.0003	0.0010
28	0.2602	0.5198	2781	0.0002	0.0006	0.0011	0.0004	0.0008	0.0011
29	0.2587	0.5189	2820	0.0002	0.0006	0.0006	0.0008	0.0006	0.0010
30	0.2610	0.5216	2757	0.0003	0.0007	0.0013	0.0005	0.0009	0.0010
Avg.	0.2601	0.5215	2777	0.0002	0.0005	0.0008	0.0007	0.0009	0.0012
Med.	0.2601	0.5217	2778	0.0002	0.0005	0.0008	0.0007	0.0008	0.0010
st dev	0.0009	0.0012	23	0.0001	0.0001	0.0003	0.0003	0.0005	0.0003
Min.	0.2582	0.5184	2745	0.0001	0.0002	0.0004	0.0002	0.0003	0.0008
Max.	0.2613	0.5232	2822	0.0003	0.0007	0.0013	0.0013	0.0016	0.0018

3.4 Data Set 2, 85°C, 80mA(Lumen Maintenance)

No.	Φ(lm)	Lumen Maintenance (%)					
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
31	35.71	99.94	99.55	99.30	99.10	98.63	98.35
32	35.78	100.14	99.80	99.41	99.19	98.71	98.55
33	35.33	99.92	99.75	99.49	98.98	98.61	98.22
34	35.90	99.94	99.67	99.28	98.80	98.30	97.83
35	35.93	100.14	99.75	99.55	99.11	99.00	98.80
36	35.74	100.08	99.66	98.99	98.71	98.18	98.01
37	36.15	100.06	99.59	98.81	98.40	98.20	97.93
38	35.78	100.03	99.64	99.08	98.69	98.10	97.46
39	35.62	100.08	99.80	99.13	98.76	98.37	97.84
40	35.98	100.03	99.83	99.36	98.67	98.44	97.67
41	35.85	99.92	99.72	99.16	98.94	98.58	98.16
42	36.06	99.89	99.47	99.06	98.67	98.47	98.28
43	35.62	99.83	99.44	98.65	98.48	98.29	98.12
44	35.41	99.97	99.63	98.96	98.67	98.45	98.08
45	35.56	100.06	99.80	99.13	98.85	98.54	98.34
46	35.99	99.92	99.53	98.89	98.44	97.86	97.61
47	36.16	100.19	99.81	99.72	99.36	99.14	98.34
48	35.72	100.08	99.75	99.36	98.82	98.49	98.21
49	35.57	100.06	99.86	99.47	99.07	98.90	98.59
50	35.92	99.89	99.55	98.91	98.41	98.30	98.22
51	35.80	99.80	99.44	99.27	98.72	98.10	97.96
52	35.79	99.94	99.50	99.25	98.97	98.32	97.63
53	35.71	100.11	99.86	99.61	99.44	99.02	98.18
54	36.00	99.81	99.39	99.14	98.53	98.42	98.28
55	36.26	100.14	99.70	99.39	99.06	98.35	98.10
56	35.58	100.06	99.78	99.04	98.79	98.29	97.50
57	35.72	99.75	99.38	98.63	98.29	98.01	97.79
58	36.04	99.97	99.53	99.25	98.95	98.22	97.78
59	35.95	99.75	99.30	98.61	98.08	97.80	97.39
60	35.60	100.11	99.72	99.49	99.04	99.02	98.68
Avg.	35.81	99.99	99.64	99.18	98.80	98.44	98.06
Med.	35.79	100.00	99.66	99.20	98.80	98.39	98.11
st dev	0.22	0.12	0.16	0.29	0.31	0.34	0.36
Min.	35.33	99.75	99.30	98.61	98.08	97.80	97.39
Max.	36.26	100.19	99.86	99.72	99.44	99.14	98.80

3.5 Data Set 2, 85°C, 80mA (Forward Voltage)

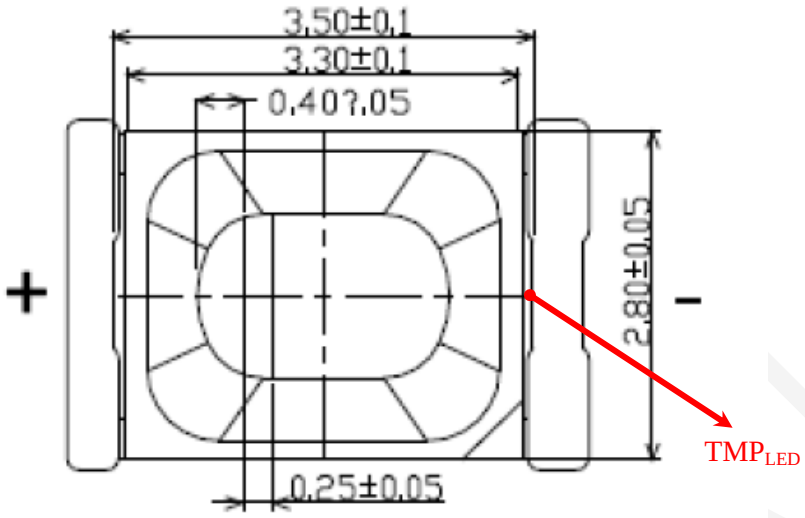
No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
31	3.191	3.196	3.201	3.178	3.185	3.206	3.208
32	3.182	3.187	3.192	3.167	3.177	3.184	3.195
33	3.176	3.179	3.180	3.155	3.169	3.208	3.204
34	3.198	3.197	3.200	3.180	3.191	3.218	3.192
35	3.217	3.221	3.220	3.204	3.214	3.239	3.214
36	3.180	3.182	3.184	3.162	3.175	3.173	3.188
37	3.203	3.204	3.209	3.191	3.204	3.204	3.205
38	3.180	3.185	3.185	3.167	3.176	3.174	3.176
39	3.189	3.187	3.190	3.172	3.179	3.182	3.190
40	3.194	3.198	3.195	3.176	3.185	3.188	3.208
41	3.201	3.198	3.202	3.184	3.193	3.193	3.201
42	3.202	3.204	3.204	3.175	3.196	3.197	3.203
43	3.197	3.198	3.202	3.185	3.197	3.194	3.206
44	3.193	3.190	3.194	3.176	3.185	3.182	3.208
45	3.175	3.179	3.181	3.160	3.172	3.168	3.170
46	3.207	3.208	3.210	3.191	3.203	3.200	3.206
47	3.179	3.181	3.180	3.159	3.172	3.170	3.180
48	3.179	3.180	3.181	3.159	3.176	3.170	3.190
49	3.185	3.190	3.188	3.169	3.181	3.177	3.205
50	3.200	3.205	3.202	3.185	3.199	3.192	3.206
51	3.214	3.216	3.218	3.200	3.212	3.209	3.229
52	3.204	3.208	3.205	3.185	3.200	3.194	3.219
53	3.201	3.202	3.204	3.183	3.201	3.197	3.220
54	3.170	3.178	3.187	3.153	3.169	3.165	3.198
55	3.175	3.176	3.188	3.154	3.170	3.163	3.194
56	3.175	3.175	3.188	3.152	3.167	3.165	3.195
57	3.181	3.186	3.191	3.165	3.180	3.175	3.187
58	3.171	3.172	3.187	3.153	3.164	3.162	3.180
59	3.173	3.174	3.181	3.183	3.169	3.164	3.171
60	3.196	3.197	3.211	3.175	3.197	3.194	3.201
Avg.	3.190	3.192	3.195	3.173	3.185	3.187	3.198
Med.	3.190	3.190	3.193	3.175	3.183	3.186	3.201
st dev	0.013	0.013	0.012	0.014	0.014	0.019	0.014
Min.	3.170	3.172	3.180	3.152	3.164	3.162	3.170
Max.	3.217	3.221	3.220	3.204	3.214	3.239	3.229

3.6 Data Set 2, 85°C, 80mA(Chromaticity Shift)

No.	u'	v'	CCT(K)	Chromaticity Shift (Δu'v')					
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
31	0.2604	0.5227	2764	0.0003	0.0008	0.0007	0.0005	0.0009	0.0011
32	0.2609	0.5232	2752	0.0003	0.0007	0.0008	0.0005	0.0014	0.0025
33	0.2610	0.5208	2760	0.0002	0.0007	0.0009	0.0004	0.0016	0.0015
34	0.2598	0.5222	2779	0.0003	0.0006	0.0008	0.0009	0.0016	0.0017
35	0.2609	0.5225	2753	0.0003	0.0007	0.0011	0.0008	0.0012	0.0015
36	0.2604	0.5225	2766	0.0004	0.0009	0.0013	0.0011	0.0011	0.0017
37	0.2593	0.5214	2794	0.0002	0.0007	0.0011	0.0009	0.0016	0.0015
38	0.2603	0.5222	2768	0.0004	0.0007	0.0012	0.0010	0.0012	0.0016
39	0.2606	0.5218	2765	0.0004	0.0007	0.0011	0.0011	0.0015	0.0016
40	0.2599	0.5223	2776	0.0001	0.0006	0.0009	0.0009	0.0014	0.0016
41	0.2605	0.5225	2762	0.0002	0.0005	0.0008	0.0007	0.0011	0.0018
42	0.2598	0.5223	2780	0.0003	0.0006	0.0011	0.0008	0.0012	0.0017
43	0.2604	0.5218	2769	0.0004	0.0009	0.0011	0.0010	0.0014	0.0016
44	0.2590	0.5214	2801	0.0002	0.0007	0.0009	0.0013	0.0017	0.0016
45	0.2604	0.5225	2765	0.0004	0.0009	0.0014	0.0016	0.0009	0.0010
46	0.2611	0.5225	2751	0.0004	0.0008	0.0011	0.0011	0.0011	0.0009
47	0.2596	0.5206	2792	0.0004	0.0008	0.0007	0.0008	0.0009	0.0018
48	0.2613	0.5220	2747	0.0003	0.0007	0.0008	0.0006	0.0010	0.0007
49	0.2615	0.5199	2753	0.0004	0.0008	0.0007	0.0004	0.0009	0.0007
50	0.2610	0.5235	2748	0.0004	0.0009	0.0015	0.0016	0.0012	0.0008
51	0.2607	0.5235	2755	0.0004	0.0009	0.0010	0.0010	0.0011	0.0008
52	0.2593	0.5186	2808	0.0004	0.0006	0.0013	0.0014	0.0016	0.0016
53	0.2609	0.5211	2762	0.0003	0.0008	0.0012	0.0008	0.0012	0.0012
54	0.2597	0.5216	2784	0.0003	0.0007	0.0009	0.0012	0.0016	0.0016
55	0.2606	0.5227	2761	0.0004	0.0009	0.0013	0.0016	0.0017	0.0019
56	0.2614	0.5200	2755	0.0004	0.0008	0.0010	0.0007	0.0021	0.0021
57	0.2601	0.5214	2777	0.0004	0.0008	0.0017	0.0016	0.0018	0.0019
58	0.2595	0.5210	2792	0.0004	0.0009	0.0013	0.0014	0.0020	0.0021
59	0.2607	0.5226	2758	0.0005	0.0010	0.0009	0.0012	0.0014	0.0018
60	0.2609	0.5226	2754	0.0002	0.0009	0.0011	0.0016	0.0009	0.0009
Avg.	0.2604	0.5219	2768	0.0003	0.0008	0.0011	0.0010	0.0013	0.0015
Med.	0.2605	0.5222	2765	0.0004	0.0008	0.0011	0.0010	0.0013	0.0016
st dev	0.0007	0.0011	16	0.0001	0.0001	0.0002	0.0004	0.0003	0.0004
Min.	0.2590	0.5186	2747	0.0001	0.0005	0.0007	0.0004	0.0009	0.0007
Max.	0.2615	0.5235	2808	0.0005	0.0010	0.0017	0.0016	0.0021	0.0025

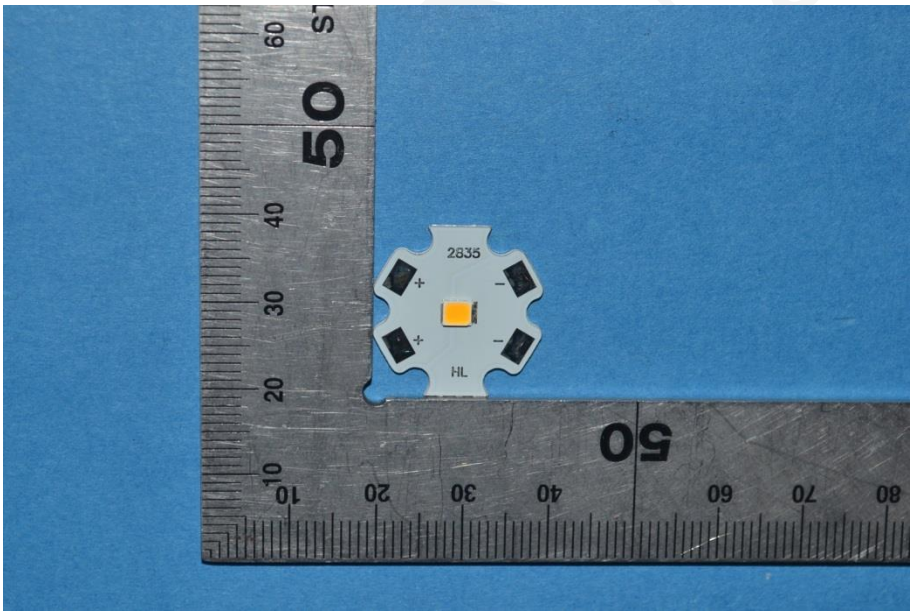
4 - DUT Photo

4.1 Mechanical Dimensions



All dimensions are in millimeter

4.2 DUT Photo



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