TEST REPORT

According to ANSI/IES LM-80-15
For

Hongli Zhihui Group Co.,Ltd. Guangzhou Branch

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

Model: HL-A-2835HW-3C-S1-08L-PCT-HR6

Report Type: 6000 Hours Test Report	**Product Type:** LED Package
Reviewed By:	Pote Wang
Report Number:	RSZ200805501-10-6000
Test Date:	2020-08-05 to 2021-05-12
Report Date:	2021-05-14
Approved by:	Bill Xiong / EE Engineer
Prepared By:	Bay Area Compliance Laboratories Corp. (Dongguan). No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China. Tel: +86-0769-86858888 Fax:+86-0769-86858588

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1 - General Information

1.1 Description of LED Light Sources

Sample Size:

50 PCS test samples were in good condition and received on 2020-08-05. The samples were numbered from 1 to 25 and 26 to 50.

Manufacturer:	Hongli Zhihui Group Co.,Ltd. Guangzhou Branch
Part Number:	HL-A-2835HW-3C-S1-08L-PCT-HR6
Part Type:	LED Package
#Drive Level:	DC 100mA
#Nominal CCT:	2700K
#Power:	0.96W
#Average Current Density per LED die:	688.895mA/mm^2
#Average Power Density per LED die:	2.204W/mm^2
#CRI:	95
#Die Spacing:	0.15mm

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:

Model name	CRI (typ.)	CCT (typ.)	Series	Parallel	Power density (W/mm^2)	Current density per LED die (mA/mm^2)	Current per die (mA)	Distance between of dies	Current (mA)
HL-A-2835HW-3C-S1-08L-PCT-HR6	95	2700K	3	1	0.098	688.895	100	0.15	100
HL-**2835H***W-3C-S1-08*-PCT-HR6-***	95	≥2200K	3	1	0.098	688.895	100	0.15	100
	95	2700K	3	1	0.098	688.895	100	0.15	100
	95	3000K	3	1	0.098	688.895	100	0.15	100
	95	4000K	3	1	0.098	688.895	100	0.15	100
	95	5000K	3	1	0.098	688.895	100	0.15	100
	95	5700K	3	1	0.098	688.895	100	0.15	100
	95	6500K	3	1	0.098	688.895	100	0.15	100
HL-**2835D***W-3C-S1-08*-PCT-HR6-***	95	≥2200K	3	1	0.098	517	100	0.15	100
	95	2700K	3	1	0.098	517	100	0.15	100
	95	3000K	3	1	0.098	517	100	0.15	100
	95	4000K	3	1	0.098	517	100	0.15	100
	95	5000K	3	1	0.098	517	100	0.15	100
	95	5700K	3	1	0.098	517	100	0.15	100
	95	6500K	3	1	0.098	517	100	0.15	100
HL-**-2835D***W-2C-S1-08*-PCT-HR6-***	95	≥2200K	2	1	0.098	638.74	150	0.15	150
	95	2700K	2	1	0.098	638.74	150	0.15	150
	95	3000K	2	1	0.098	638.74	150	0.15	150
	95	4000K	2	1	0.098	638.74	150	0.15	150
	95	5000K	2	1	0.098	638.74	150	0.15	150
	95	5700K	2	1	0.098	638.74	150	0.15	150
	95	6500K	2	1	0.098	638.74	150	0.15	150

HL-**-2835H***W-S1-08*-PCT-HR6-***	95	≥2200K	1	1	0.0204	413.33	60	/	60
	95	2700K	1	1	0.0204	413.33	60	/	60
	95	3000K	1	1	0.0204	413.33	60	/	60
	95	4000K	1	1	0.0204	413.33	60	/	60
	95	5000K	1	1	0.0204	413.33	60	/	60
	95	5700K	1	1	0.0204	413.33	60	/	60
	95	6500K	1	1	0.0204	413.33	60	/	60
HL-**-2835H***W-S1-08*-PCT-HR6-***	95	≥2200K	1	1	0.0347	688.89	100	/	100
	95	2700K	1	1	0.0347	688.89	100	/	100
	95	3000K	1	1	0.0347	688.89	100	/	100
	95	4000K	1	1	0.0347	688.89	100	/	100
	95	5000K	1	1	0.0347	688.89	100	/	100
	95	5700K	1	1	0.0347	688.89	100	/	100
	95	6500K	1	1	0.0347	688.89	100	/	100
HL-**-2835D***W-S1-08*-PCT-HR6-***	95	≥2200K	1	1	0.0521	638.74	150	/	150
	95	2700K	1	1	0.0521	638.74	150	/	150
	95	3000K	1	1	0.0521	638.74	150	/	150
	95	4000K	1	1	0.0521	638.74	150	/	150
	95	5000K	1	1	0.0521	638.74	150	/	150
	95	5700K	1	1	0.0521	638.74	150	/	150
	95	6500K	1	1	0.0521	638.74	150	/	150
HL-**-2835H***W-2-S1-08*-PCT-HR6-***	95	≥2200K	1	2	0.0521	516.89	75	0.15	150
	95	2700K	1	2	0.0521	516.89	75	0.15	150
	95	3000K	1	2	0.0521	516.89	75	0.15	150
	95	4000K	1	2	0.0521	516.89	75	0.15	150
	95	5000K	1	2	0.0521	516.89	75	0.15	150
	95	5700K	1	2	0.0521	516.89	75	0.15	150
	95	6500K	1	2	0.0521	516.89	75	0.15	150
HL-**-2835D***W-2-S1-08*-PCT-HR6-***	95	≥2200K	1	2	0.0521	387.50	75	0.15	150
	95	2700K	1	2	0.0521	387.50	75	0.15	150
	95	3000K	1	2	0.0521	387.50	75	0.15	150
	95	4000K	1	2	0.0521	387.50	75	0.15	150
	95	5000K	1	2	0.0521	387.50	75	0.15	150
	95	5700K	1	2	0.0521	387.50	75	0.15	150
	95	6500K	1	2	0.0521	387.50	75	0.15	150

Note: The model name begins with "HL", such as "HL-**-2835H***W-3C-S1-08*-PCT-HR6-***","*" is described in detail as follows :

1. The first "**" is a letter A or AS which stands for the process type.

2. The second "***" is a number from 1 to 999 which stands for the brightness level.

3. The third "*" is a letter L or None which stands for the bonding wire style.

4. The fourth "***" is the letter, which stands for the customer code.

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
High Accuracy Array Spectroradiometer	EVERFINE	HAAS 2000	P600674CM5391140	2020-10-22	2021-10-21
0.5M Integrating Sphere	EVERFINE	0.5m	NA	2020-10-22	2021-10-21

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
LED Test Source	EVERFINE	LTS-300	P185616CJ1391143	2020-10-21	2021-10-20
Standard Light Source	EVERFINE	D062	1011093	2020-10-20	2021-10-19
Multilayer aging machine	BACL	B2-270	20015	2021-02-24	2022-02-23
DC Power Supply	BACL	B12001-12	90023	2021-02-24	2022-02-23

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 measurements is U=1.59% (K=2), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is U=21K (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, 100mA

Part Number:	HL-A-2835HW-3C-S1-08L-PCT-HR6
Number of Units:	25
Case Temperature:	>53°C
Ambient Temperature:	>50°C
Life Test Drive Current:	100mA
Measurement Current:	100mA

Data Set 2: 105°C, 100mA

Part Number:	HL-A-2835HW-3C-S1-08L-PCT-HR6
Number of Units:	25
Case Temperature:	>103°C
Ambient Temperature:	>100°C
Life Test Drive Current:	100mA
Measurement Current:	100mA

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	2.148E-06	1.004	>36000 hours
2	25	0	1000hrs	6000hrs	3.320E-06	1.004	>36000 hours

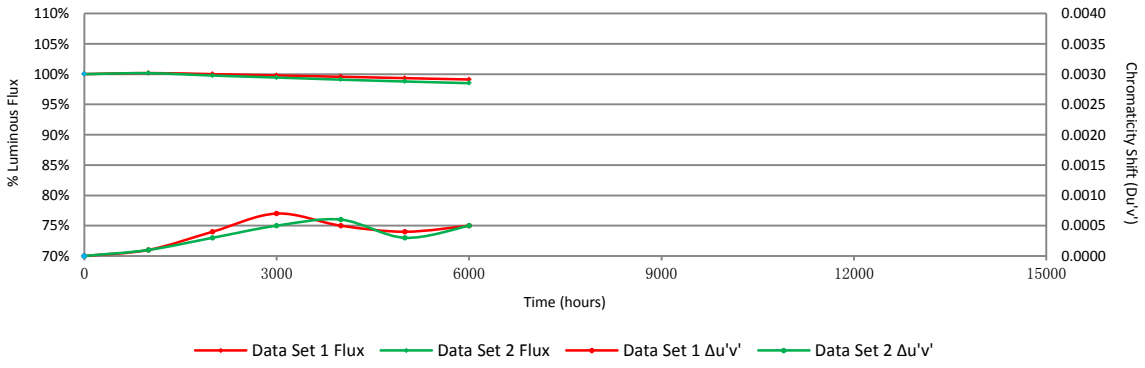
Average Lumen Maintenance (Percentage of Initial Luminous Flux)

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	100.17%	99.99%	99.77%	99.56%	99.33%	99.11%
2	100.15%	99.76%	99.43%	99.08%	98.78%	98.50%

Average Chromaticity Shift

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	0.0001	0.0004	0.0007	0.0005	0.0004	0.0005
2	0.0001	0.0003	0.0005	0.0006	0.0003	0.0005

Average Lumen Maintenance and Chromaticity Shift VS. Time



3 - Test Data

3.1 Data Set 1, 55°C, 100mA (Lumen Maintenance)

No.	Φ(lm)	Lumen Maintenance (%)					
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	92.48	100.38	100.32	100.14	99.77	99.71	99.52
2	92.31	100.32	99.92	99.73	99.50	99.29	99.14
3	93.05	100.18	99.82	99.30	99.28	98.82	98.53
4	91.73	100.28	100.15	100.07	99.95	99.79	99.55
5	91.42	100.31	100.19	100.13	99.91	99.38	99.07
6	92.31	100.22	99.95	99.70	99.63	99.09	98.72
7	91.70	100.36	100.33	100.25	100.20	99.85	99.64
8	92.63	99.89	99.84	99.56	99.36	99.35	99.10
9	91.95	100.15	100.03	99.93	99.64	99.48	99.31
10	91.83	100.21	100.04	99.93	99.65	99.32	99.07
11	92.08	100.08	99.90	99.74	99.44	99.12	98.95
12	93.33	99.95	99.83	99.66	99.56	98.98	98.77
13	92.45	100.31	100.17	100.11	99.85	99.34	99.12
14	92.02	100.39	100.24	99.88	99.68	99.64	99.42
15	91.90	100.24	100.20	99.98	99.68	99.52	99.37
16	92.24	100.33	100.27	99.88	99.79	99.59	99.48
17	91.71	100.09	99.98	99.75	99.65	99.31	99.11
18	91.09	100.23	100.08	99.95	99.81	99.64	99.45
19	89.68	100.14	99.86	99.63	99.44	99.33	99.17
20	89.53	99.78	99.72	99.59	99.41	99.26	99.02
21	90.88	99.96	99.71	99.31	99.11	98.99	98.69
22	91.08	99.88	99.64	99.42	99.00	98.99	98.69
23	89.52	100.23	99.84	99.60	99.25	99.24	98.95
24	89.37	100.19	99.85	99.69	99.30	99.14	99.03
25	90.72	100.24	99.93	99.35	99.06	99.03	98.90
Avg.	91.56	100.17	99.99	99.77	99.56	99.33	99.11
Med.	91.83	100.22	99.95	99.74	99.63	99.32	99.10
st dev	1.10	0.17	0.20	0.27	0.29	0.27	0.30
Min.	89.37	99.78	99.64	99.30	99.00	98.82	98.53
Max.	93.33	100.39	100.33	100.25	100.20	99.85	99.64

3.2 Data Set 1, 55°C, 100mA (Forward Voltage)

No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	9.116	9.112	9.118	9.123	9.127	9.138	9.146
2	9.128	9.127	9.143	9.157	9.163	9.165	9.149
3	9.091	9.098	9.112	9.118	9.125	9.131	9.112
4	9.091	9.092	9.110	9.120	9.130	9.136	9.122
5	9.095	9.094	9.129	9.132	9.141	9.145	9.135
6	9.087	9.094	9.113	9.115	9.127	9.132	9.126
7	9.108	9.108	9.139	9.145	9.153	9.159	9.156
8	9.095	9.100	9.121	9.127	9.136	9.139	9.135
9	9.095	9.105	9.122	9.121	9.133	9.133	9.161
10	9.103	9.106	9.130	9.134	9.150	9.147	9.135
11	9.099	9.091	9.123	9.118	9.131	9.137	9.126
12	9.103	9.103	9.124	9.128	9.142	9.144	9.128
13	9.095	9.094	9.127	9.121	9.136	9.142	9.127
14	9.078	9.086	9.109	9.109	9.125	9.125	9.111
15	9.103	9.102	9.128	9.128	9.140	9.141	9.128
16	9.099	9.101	9.125	9.122	9.139	9.136	9.136
17	9.083	9.091	9.122	9.117	9.131	9.134	9.122
18	9.120	9.123	9.153	9.142	9.161	9.157	9.152
19	9.078	9.071	9.110	9.107	9.120	9.123	9.115
20	9.087	9.091	9.116	9.111	9.129	9.129	9.140
21	9.087	9.085	9.119	9.115	9.133	9.133	9.125
22	9.087	9.087	9.113	9.109	9.125	9.128	9.124
23	9.087	9.097	9.119	9.117	9.131	9.134	9.170
24	9.103	9.101	9.136	9.137	9.153	9.151	9.150
25	9.091	9.098	9.115	9.111	9.129	9.133	9.139
Avg.	9.096	9.098	9.123	9.123	9.136	9.139	9.135
Med.	9.095	9.098	9.122	9.121	9.133	9.136	9.135
st dev	0.012	0.012	0.011	0.012	0.012	0.011	0.015
Min.	9.078	9.071	9.109	9.107	9.120	9.123	9.111
Max.	9.128	9.127	9.153	9.157	9.163	9.165	9.170

3.3 Data Set 1, 55°C, 100mA (Chromaticity Shift)

No.	u'	v'	CCT(K)	Chromaticity Shift (Δu'v')					
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	0.2550	0.5323	2837	0.0000	0.0004	0.0005	0.0006	0.0009	0.0012
2	0.2567	0.5324	2800	0.0002	0.0004	0.0011	0.0008	0.0006	0.0006
3	0.2550	0.5325	2837	0.0001	0.0004	0.0006	0.0004	0.0003	0.0005
4	0.2575	0.5325	2784	0.0000	0.0005	0.0007	0.0005	0.0003	0.0004
5	0.2584	0.5343	2756	0.0000	0.0004	0.0009	0.0006	0.0004	0.0005
6	0.2560	0.5328	2813	0.0001	0.0006	0.0011	0.0008	0.0006	0.0007
7	0.2575	0.5330	2780	0.0002	0.0002	0.0009	0.0006	0.0003	0.0005
8	0.2559	0.5326	2817	0.0001	0.0004	0.0007	0.0004	0.0003	0.0004
9	0.2559	0.5332	2814	0.0000	0.0004	0.0008	0.0005	0.0001	0.0004
10	0.2563	0.5323	2810	0.0001	0.0006	0.0008	0.0007	0.0004	0.0003
11	0.2560	0.5336	2809	0.0001	0.0004	0.0009	0.0006	0.0004	0.0004
12	0.2553	0.5332	2826	0.0001	0.0002	0.0007	0.0004	0.0003	0.0004
13	0.2557	0.5331	2817	0.0001	0.0006	0.0008	0.0007	0.0004	0.0004
14	0.2571	0.5337	2786	0.0003	0.0005	0.0012	0.0010	0.0006	0.0007
15	0.2582	0.5336	2765	0.0002	0.0003	0.0011	0.0007	0.0003	0.0006
16	0.2565	0.5327	2803	0.0001	0.0003	0.0009	0.0007	0.0003	0.0005
17	0.2563	0.5332	2805	0.0002	0.0003	0.0012	0.0008	0.0007	0.0008
18	0.2572	0.5321	2791	0.0001	0.0005	0.0004	0.0001	0.0004	0.0006
19	0.2580	0.5331	2769	0.0000	0.0002	0.0005	0.0002	0.0002	0.0004
20	0.2586	0.5327	2758	0.0002	0.0006	0.0003	0.0002	0.0003	0.0006
21	0.2553	0.5307	2838	0.0000	0.0006	0.0002	0.0003	0.0004	0.0005
22	0.2571	0.5328	2790	0.0001	0.0003	0.0002	0.0002	0.0004	0.0006
23	0.2586	0.5321	2762	0.0001	0.0004	0.0002	0.0001	0.0003	0.0006
24	0.2589	0.5328	2751	0.0001	0.0005	0.0004	0.0001	0.0002	0.0003
25	0.2560	0.5324	2816	0.0001	0.0004	0.0004	0.0002	0.0001	0.0003
Avg.	0.2568	0.5328	2797	0.0001	0.0004	0.0007	0.0005	0.0004	0.0005
Med.	0.2565	0.5328	2803	0.0001	0.0004	0.0007	0.0005	0.0003	0.0005
st dev	0.0012	0.0007	27	0.0001	0.0001	0.0003	0.0003	0.0002	0.0002
Min.	0.2550	0.5307	2751	0.0000	0.0002	0.0002	0.0001	0.0001	0.0003
Max.	0.2589	0.5343	2838	0.0003	0.0006	0.0012	0.0010	0.0009	0.0012

3.4 Data Set 2, 105°C, 100mA (Lumen Maintenance)

No.	Φ(lm)	Lumen Maintenance (%)					
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
26	90.08	100.43	100.20	99.89	99.57	99.28	99.09
27	90.39	100.07	100.06	99.66	99.31	99.16	99.04
28	90.07	100.11	100.08	99.69	99.34	99.20	98.85
29	89.51	99.92	99.77	99.71	99.16	98.92	98.61
30	91.54	100.38	99.67	99.56	99.10	98.99	98.70
31	91.37	99.84	99.30	99.03	98.70	98.59	98.29
32	90.32	100.09	99.60	99.38	99.24	98.99	98.75
33	91.06	100.16	99.69	99.31	99.12	98.99	98.68
34	90.19	100.08	99.68	99.38	99.16	99.04	98.59
35	90.35	100.13	99.58	99.24	99.05	98.76	98.58
36	90.38	100.12	99.85	99.56	98.93	98.45	98.25
37	89.37	99.99	99.40	99.24	99.02	98.83	98.67
38	91.07	99.78	99.52	98.96	98.55	98.13	97.89
39	89.09	100.16	99.81	99.43	98.94	98.27	97.97
40	89.79	100.35	99.55	99.12	98.75	98.65	98.33
41	89.59	100.17	99.65	99.26	98.96	98.84	98.52
42	89.94	100.31	99.99	99.56	99.07	98.70	98.53
43	90.01	100.30	99.57	99.29	98.80	98.11	97.86
44	90.43	100.22	99.70	99.37	99.09	98.45	98.10
45	90.69	100.10	99.98	99.34	98.86	98.42	98.11
46	90.49	100.22	99.93	99.69	99.27	98.76	98.49
47	90.33	100.03	99.79	99.63	99.34	98.90	98.44
48	89.89	100.13	99.62	98.97	98.78	98.64	98.45
49	90.92	100.26	100.10	99.92	99.82	99.62	99.29
50	91.31	100.32	99.85	99.63	99.06	98.92	98.53
Avg.	90.33	100.15	99.76	99.43	99.08	98.78	98.50
Med.	90.33	100.13	99.70	99.38	99.07	98.83	98.53
st dev	0.63	0.16	0.23	0.27	0.28	0.36	0.36
Min.	89.09	99.78	99.30	98.96	98.55	98.11	97.86
Max.	91.54	100.43	100.20	99.92	99.82	99.62	99.29

3.5 Data Set 2, 105°C, 100mA (Forward Voltage)

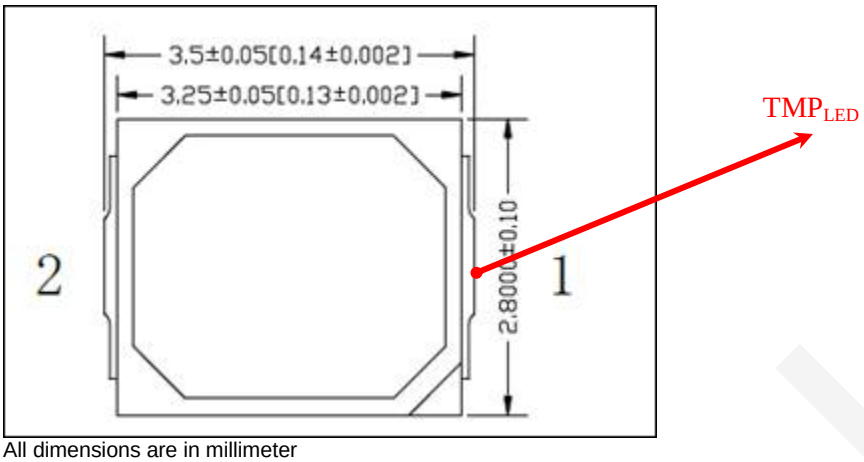
No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
26	9.091	9.108	9.123	9.123	9.138	9.136	9.144
27	9.095	9.096	9.120	9.126	9.142	9.136	9.138
28	9.074	9.085	9.107	9.107	9.119	9.119	9.132
29	9.083	9.082	9.108	9.113	9.125	9.125	9.121
30	9.099	9.098	9.138	9.141	9.153	9.143	9.154
31	9.099	9.100	9.142	9.137	9.149	9.141	9.142
32	9.091	9.094	9.115	9.119	9.132	9.126	9.132
33	9.091	9.091	9.131	9.127	9.138	9.133	9.136
34	9.083	9.096	9.115	9.117	9.129	9.126	9.127
35	9.087	9.089	9.110	9.117	9.130	9.124	9.128
36	9.091	9.084	9.118	9.124	9.131	9.131	9.129
37	9.087	9.095	9.107	9.119	9.130	9.125	9.121
38	9.099	9.096	9.124	9.129	9.139	9.137	9.138
39	9.095	9.089	9.101	9.112	9.124	9.123	9.120
40	9.103	9.109	9.124	9.129	9.142	9.137	9.141
41	9.103	9.107	9.124	9.128	9.136	9.135	9.133
42	9.087	9.089	9.116	9.121	9.131	9.133	9.140
43	9.087	9.092	9.124	9.127	9.137	9.135	9.136
44	9.099	9.106	9.120	9.129	9.141	9.135	9.141
45	9.091	9.090	9.116	9.123	9.133	9.128	9.133
46	9.095	9.100	9.123	9.129	9.140	9.131	9.134
47	9.070	9.077	9.101	9.105	9.116	9.111	9.116
48	9.066	9.074	9.096	9.098	9.109	9.112	9.109
49	9.091	9.100	9.114	9.127	9.133	9.135	9.136
50	9.078	9.085	9.112	9.118	9.128	9.126	9.130
Avg.	9.089	9.093	9.117	9.122	9.133	9.130	9.132
Med.	9.091	9.094	9.116	9.123	9.133	9.131	9.133
st dev	0.010	0.009	0.011	0.010	0.010	0.008	0.010
Min.	9.066	9.074	9.096	9.098	9.109	9.111	9.109
Max.	9.103	9.109	9.142	9.141	9.153	9.143	9.154

3.6 Data Set 2, 105°C, 100mA (Chromaticity Shift)

No.	u'	v'	CCT(K)	Chromaticity Shift (Δu'v')					
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
26	0.2585	0.5328	2760	0.0001	0.0004	0.0006	0.0007	0.0004	0.0007
27	0.2583	0.5323	2767	0.0001	0.0004	0.0007	0.0007	0.0006	0.0008
28	0.2578	0.5330	2775	0.0002	0.0002	0.0004	0.0005	0.0002	0.0004
29	0.2578	0.5319	2780	0.0002	0.0001	0.0004	0.0005	0.0002	0.0003
30	0.2559	0.5315	2822	0.0002	0.0001	0.0003	0.0006	0.0005	0.0006
31	0.2573	0.5330	2785	0.0003	0.0001	0.0005	0.0007	0.0004	0.0006
32	0.2568	0.5321	2799	0.0000	0.0001	0.0001	0.0004	0.0002	0.0004
33	0.2570	0.5329	2792	0.0002	0.0003	0.0003	0.0005	0.0001	0.0006
34	0.2570	0.5323	2794	0.0002	0.0003	0.0002	0.0004	0.0001	0.0003
35	0.2570	0.5328	2792	0.0002	0.0003	0.0005	0.0006	0.0002	0.0003
36	0.2578	0.5324	2778	0.0002	0.0004	0.0006	0.0007	0.0004	0.0006
37	0.2581	0.5317	2774	0.0001	0.0003	0.0004	0.0005	0.0003	0.0005
38	0.2565	0.5333	2800	0.0001	0.0003	0.0006	0.0007	0.0003	0.0005
39	0.2587	0.5317	2762	0.0001	0.0003	0.0005	0.0006	0.0002	0.0005
40	0.2595	0.5328	2739	0.0001	0.0003	0.0005	0.0006	0.0003	0.0007
41	0.2572	0.5322	2791	0.0001	0.0003	0.0005	0.0007	0.0003	0.0005
42	0.2583	0.5334	2761	0.0001	0.0003	0.0004	0.0005	0.0002	0.0003
43	0.2583	0.5330	2764	0.0002	0.0005	0.0005	0.0007	0.0003	0.0005
44	0.2571	0.5329	2789	0.0000	0.0003	0.0004	0.0006	0.0002	0.0004
45	0.2575	0.5343	2774	0.0001	0.0003	0.0005	0.0007	0.0001	0.0004
46	0.2578	0.5327	2776	0.0001	0.0003	0.0004	0.0005	0.0002	0.0004
47	0.2574	0.5338	2780	0.0001	0.0003	0.0003	0.0005	0.0003	0.0005
48	0.2579	0.5324	2775	0.0001	0.0005	0.0009	0.0011	0.0008	0.0011
49	0.2572	0.5331	2787	0.0001	0.0003	0.0005	0.0006	0.0004	0.0006
50	0.2555	0.5332	2822	0.0000	0.0002	0.0002	0.0005	0.0004	0.0005
Avg.	0.2575	0.5327	2782	0.0001	0.0003	0.0005	0.0006	0.0003	0.0005
Med.	0.2575	0.5328	2780	0.0001	0.0003	0.0005	0.0006	0.0003	0.0005
st dev	0.0009	0.0007	19	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002
Min.	0.2555	0.5315	2739	0.0000	0.0001	0.0001	0.0004	0.0001	0.0003
Max.	0.2595	0.5343	2822	0.0003	0.0005	0.0009	0.0011	0.0008	0.0011

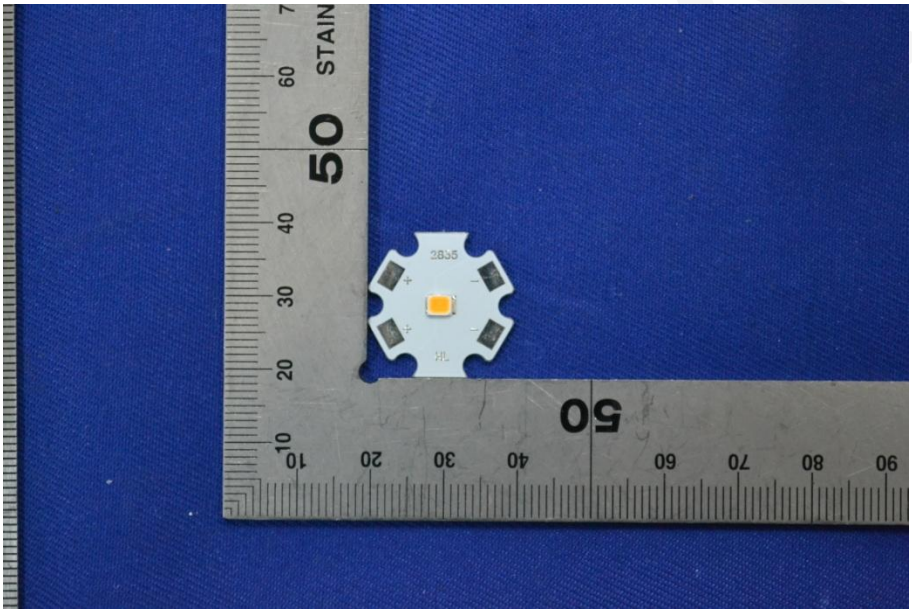
4 - DUT Photo

4.1 Mechanical Dimensions



All dimensions are in millimeter

4.2 DUT Photo



Directions

1. The information marked “superscript #” is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
2. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
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4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.
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**********END OF REPORT**********