



TEST REPORT

According to ANSI/IES LM-80-15
For

Shenzhen Runlite Technology Co.,Ltd

Building A15, Tantou the 4th Industrial Estate, SongGang Town, BaoAn District,
ShenZhen, China

Model: F4015A-251W27SL2L4HR0R7-D000

Report Type: 6000 Hours Test Report		Product Type: LED Module	
Test Engineer:	Pote Wang	<i>Pote Wang</i>	
Report Number:	RSZ181013501-10		
Test Date:	2018-10-14 to 2019-06-22		
Report Date:	2019-07-11		
Reviewed By:	Blake Zhang / EE Engineer	<i>Blake Zhang</i>	
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.		

Note: The test data was only valid for the test sample(s). This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Dongguan).

This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

TABLE OF CONTENTS

1 - General Information	3
1.1 Description of LED Light Sources	3
1.2 Standards and Reference Documentations	4
1.3 Testing Equipment	4
1.4 Drive Level	4
1.5 Ambient Conditions for Maintenance Test	4
1.6 Photometric Measurement Method and Uncertainty.....	4
1.7 Statement of Traceability	5
1.8 Sample Set.....	6
2 - Summary of Test Result	7
3 - Test Data	8
3.1 Data Set 1, 85°C, 22mA (Lumen Maintenance)	8
3.2 Data Set 1, 85°C, 22mA (Forward Voltage).....	9
3.3 Data Set 1, 85°C, 22mA (Chromaticity Shift)	10
3.4 Data Set 2, 105°C, 22mA (Lumen Maintenance)	11
3.5 Data Set 2, 105°C, 22mA (Forward Voltage).....	12
3.6 Data Set 2, 105°C, 22mA (Chromaticity Shift).....	13
3.7 Data Set 3, 115°C, 22mA (Lumen Maintenance)	14
3.8 Data Set 3, 115°C, 22mA (Forward Voltage).....	15
3.9 Data Set 3, 115°C, 22mA (Chromaticity Shift).....	16
4 - DUT Photo	17
4.1 Mechanical Dimensions	17
4.2 DUT Photo.....	17

1 - General Information

1.1 Description of LED Light Sources

Sample Size:

36 PCS samples were received on 2018-10-13. The samples were numbered from 1 to 12, 13 to 24 and 25 to 36.

Manufacturer: Shenzhen Runlite Technology Co.,Ltd
 Part Number: F4015A-251W27SL2L4HR0R7-D000
 Part Type: LED Module
 Drive Level: DC 22mA
 Nominal CCT: 2700K
 Power: 1.496W
 Average Current Density per LED die: 236.806mA/mm²
 Average Power Density per LED die: 0.635W/mm²
 CRI: 90
 Die Spacing: 1.27mm

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 type	Model Name	Total Input Current (mA)	Series	Parallel	CCT (K)	Driver current per die (mA)	Current Density per Die (mA/mm ²)	Power Density per PCB (W/mm ²)	Die Spacing (mm)
Master model	F4015A-251W27SL2L4HR0R7-D000	22	25	1	2700	22	236.806	0.0298	1.27
Multiple Model	F4015A-251XXXXL0L1XXXX-XXXX	22	25	1	2200-6500	22	136.4	0.0298	1.27
	F4015A-251XXXXL1L2XXXX-XXXX	22	25	1	2200-6500	22	121.786	0.0298	1.27
	F4015A-251XXXXL2L3XXXX-XXXX	22	25	1	2200-6500	22	113.667	0.0298	1.27
	F4015A-251XXXXL3L4XXXX-XXXX	22	25	1	2200-6500	22	110.715	0.0298	1.27
	F4015A-241XXXXK6L0XXXX-XXXX	22	24	1	2200-6500	22	136.4	0.0287	1.32
	F4015A-241XXXXL0L1XXXX-XXXX	22	24	1	2200-6500	22	121.786	0.0287	1.32
	F4015A-241XXXXL1L2XXXX-XXXX	22	24	1	2200-6500	22	113.667	0.0287	1.32
	F4015A-241XXXXL2L3XXXX-XXXX	22	24	1	2200-6500	22	110.715	0.0287	1.32
	F4015A-131XXXXK2K3XXXX-XXXX	25	13	1	2200-6500	25	155	0.0184	2.36
	F4015A-131XXXXK3K4XXXX-XXXX	25	13	1	2200-6500	25	138.383	0.0184	2.36
	F4015A-131XXXXK4K5XXXX-XXXX	25	13	1	2200-6500	25	125.812	0.0184	2.36
	F4015A-131XXXXK5K6XXXX-XXXX	25	13	1	2200-6500	25	129.167	0.0184	2.36
	F4015A-121XXXXK0K1XXXX-XXXX	25	12	1	2200-6500	25	155	0.0172	2.54

Model type	Model Name	Total Input Current (mA)	Series	Parallel	CCT (K)	Driver current per die (mA)	Current Density per Die (mA/mm ²)	Power Density per PCB (W/mm ²)	Die Spacing (mm)
	F4015A-121XXXXK1K2XXXX-XXXX	25	12	1	2200-6500	25	138.383	0.0172	2.54
	F4015A-121XXXXK2K3XXXX-XXXX	25	12	1	2200-6500	25	125.812	0.0172	2.54
	F4015A-121XXXXK3K4XXXX-XXXX	25	12	1	2200-6500	25	129.167	0.0172	2.54

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
1.0m integrating sphere	SENSING	SCD-20008	N/A	2019-06-28	2020-06-27
spectroradiometer	SENSING	SCD-20008	N/A	2019-06-28	2020-06-27
DC Power Supply	Hanshenpu Yuan	HSPY-100-05	2013010210003	2019-05-04	2020-05-04
Standard Light Source	EVERFINE	D204	G100283CJ6351178	2018-12-24	2019-12-24
DC Power Supply	BACL	B25001	90020	2018-12-17	2019-12-17
Multilayer aging machine	BACL	B2-270	20024	2019-03-13	2020-03-12
DC Power Supply	BACL	B12001-12	90023	2018-12-17	2019-12-17

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 $\pm 3\%$ of the specified value of the manufacturer during maintenance test, and was within $\pm 0.5\%$ 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 $\pm 3\%$ 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 \pm 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'. 2 π measurement was used and sample was driven by DC power supply. The forward current was regulated to within $\pm 0.5\%$ of the nominal value. The test system was calibrated by halogen reference lamp. The ambient temperature during test was set to 25°C \pm 2°C, RH <65%. The temperature measurement point was located in the sphere and the temperature was detected by a temperature probe.



Bay Area Compliance Laboratories Corp. (Dongguan)

No.69, Pulongcun, Puxinhu Industrial Area Tangxia ,
Dongguan, Guangdong, China.
The IAS Accreditation Number TL-460

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 $U=0.8671^{\circ}C$ ($K=2$), 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).

FINAL

1.8 Sample Set

Data Set 1: 85°C, 22mA

Part Number: F4015A-251W27SL2L4HR0R7-D000
Number of Units: 12
Case Temperature: >83°C
Ambient Temperature: >80°C
Life Test Drive Current: 22mA
Measurement Current: 22mA

Data Set 2: 105°C, 22mA

Part Number: F4015A-251W27SL2L4HR0R7-D000
Number of Units: 12
Case Temperature: >103°C
Ambient Temperature: >100°C
Life Test Drive Current: 22mA
Measurement Current: 22mA

Data Set 3: 115°C, 22mA

Part Number: F4015A-251W27SL2L4HR0R7-D000
Number of Units: 12
Case Temperature: >113°C
Ambient Temperature: >110°C
Life Test Drive Current: 22mA
Measurement Current: 22mA

2 - Summary of Test Result

Data Set:	Sample Size	Failures Observed:	Test Interval	Test Duration	α	β	Reported TM-21 L ₇₀ Lifetime
1	12	0	1000hrs	6000hrs	7.221E-06	1.002	>33000
2	12	0	1000hrs	6000hrs	8.644E-06	1.003	>33000
3	12	0	1000hrs	6000hrs	9.841E-06	1.003	>33000

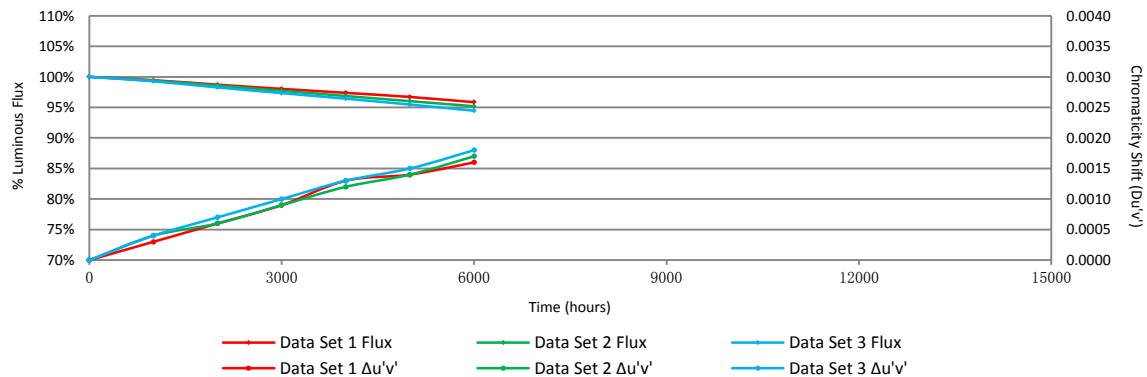
Average Lumen Maintenance (Percentage of Initial Luminous Flux)

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	99.45%	98.72%	98.03%	97.38%	96.71%	95.85%
2	99.37%	98.58%	97.72%	96.87%	96.02%	95.19%
3	99.27%	98.27%	97.34%	96.43%	95.47%	94.46%

Average Chromaticity Shift

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	0.0003	0.0006	0.0009	0.0013	0.0014	0.0016
2	0.0004	0.0006	0.0009	0.0012	0.0014	0.0017
3	0.0004	0.0007	0.001	0.0013	0.0015	0.0018

Average Lumen Maintenance and Chromaticity Shift VS. Time



3 - Test Data

3.1 Data Set 1, 85°C, 22mA (Lumen Maintenance)

No.	Φ(lm)	Lumen Maintenance (%)					
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	249.59	99.69	98.93	98.28	97.46	96.85	96.00
2	250.61	99.44	98.78	97.91	97.24	96.51	95.56
3	254.44	99.50	99.03	98.27	97.41	96.61	95.95
4	254.44	99.50	98.30	97.75	97.24	96.74	96.17
5	253.54	99.63	98.93	98.43	97.96	97.26	96.32
6	263.88	99.58	98.73	97.83	97.26	96.69	95.93
7	259.67	99.51	98.87	98.26	97.82	96.87	95.94
8	257.12	99.00	98.51	97.82	97.08	96.24	95.36
9	256.48	99.40	98.55	97.93	97.39	96.85	96.11
10	256.22	99.50	98.56	97.87	97.23	96.38	95.29
11	258.39	99.25	98.56	97.82	97.18	96.74	95.72
12	257.75	99.36	98.87	98.18	97.34	96.75	95.87
Avg.	256.01	99.45	98.72	98.03	97.38	96.71	95.85
Med.	256.35	99.50	98.75	97.92	97.30	96.74	95.94
st dev	3.90	0.18	0.22	0.23	0.26	0.26	0.32
Min.	249.59	99.00	98.30	97.75	97.08	96.24	95.29
Max.	263.88	99.69	99.03	98.43	97.96	97.26	96.32

3.2 Data Set 1, 85°C, 22mA (Forward Voltage)

No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	69.90	69.84	69.71	69.64	69.45	69.39	69.43
2	69.97	69.84	69.70	69.44	69.25	68.98	68.93
3	70.01	69.88	69.62	69.34	69.14	69.03	68.88
4	69.86	69.73	69.52	69.44	69.27	69.11	69.31
5	70.09	69.73	69.56	69.53	69.24	69.19	69.18
6	69.93	69.82	69.74	69.16	69.01	68.93	68.90
7	69.89	69.73	69.62	69.29	69.17	69.30	69.16
8	69.87	69.60	69.55	69.41	69.22	69.20	69.07
9	69.89	69.74	69.40	69.21	69.12	69.04	69.03
10	69.80	69.69	69.49	69.37	69.31	69.14	69.03
11	69.68	69.40	69.31	69.12	69.11	69.04	68.96
12	69.77	69.60	69.49	69.41	69.34	69.24	69.14
Avg.	69.89	69.72	69.56	69.36	69.22	69.13	69.09
Med.	69.89	69.73	69.56	69.39	69.23	69.13	69.05
st dev	0.11	0.13	0.13	0.15	0.12	0.14	0.17
Min.	69.68	69.40	69.31	69.12	69.01	68.93	68.88
Max.	70.09	69.88	69.74	69.64	69.45	69.39	69.43

3.3 Data Set 1, 85°C, 22mA (Chromaticity Shift)

No.	u'	v'	CCT(K)	Chromaticity Shift ($\Delta u'v'$)					
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	0.2584	0.5222	2812	0.0002	0.0003	0.0005	0.0009	0.0011	0.0012
2	0.2596	0.5234	2780	0.0002	0.0005	0.0011	0.0016	0.0020	0.0022
3	0.2601	0.5233	2768	0.0003	0.0007	0.0013	0.0017	0.0021	0.0023
4	0.2598	0.5233	2774	0.0002	0.0006	0.0008	0.0012	0.0015	0.0009
5	0.2592	0.5245	2782	0.0005	0.0009	0.0010	0.0017	0.0017	0.0019
6	0.2603	0.5248	2758	0.0001	0.0004	0.0006	0.0009	0.0010	0.0011
7	0.2586	0.5227	2804	0.0001	0.0006	0.0012	0.0015	0.0011	0.0013
8	0.2594	0.5241	2780	0.0003	0.0005	0.0007	0.0010	0.0012	0.0014
9	0.2591	0.5241	2786	0.0003	0.0010	0.0013	0.0014	0.0016	0.0017
10	0.2594	0.5240	2780	0.0002	0.0007	0.0009	0.0011	0.0014	0.0016
11	0.2584	0.5221	2810	0.0004	0.0007	0.0009	0.0011	0.0013	0.0015
12	0.2590	0.5228	2796	0.0003	0.0005	0.0007	0.0009	0.0012	0.0015
Avg.	0.2593	0.5234	2786	0.0003	0.0006	0.0009	0.0013	0.0014	0.0016
Med.	0.2593	0.5234	2781	0.0003	0.0006	0.0009	0.0012	0.0014	0.0015
st dev	0.0006	0.0009	17	0.0001	0.0002	0.0003	0.0003	0.0004	0.0004
Min.	0.2584	0.5221	2758	0.0001	0.0003	0.0005	0.0009	0.0010	0.0009
Max.	0.2603	0.5248	2812	0.0005	0.0010	0.0013	0.0017	0.0021	0.0023

3.4 Data Set 2, 105°C, 22mA (Lumen Maintenance)

No.	Φ(lm)	Lumen Maintenance (%)					
	Ohr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
13	258.90	99.37	98.73	97.80	97.22	96.52	95.79
14	259.28	99.41	98.56	97.66	96.77	95.60	94.68
15	258.90	99.29	98.78	97.95	97.07	96.67	95.99
16	259.92	99.51	98.73	97.76	96.91	95.85	94.98
17	260.43	99.54	98.53	97.90	96.97	95.85	94.69
18	260.94	99.12	98.26	97.33	96.21	95.15	94.30
19	260.31	99.18	98.54	97.51	96.79	96.06	95.27
20	259.54	99.41	98.44	97.75	96.88	96.05	95.24
21	254.69	99.50	98.90	97.76	96.87	95.78	95.03
22	259.03	99.61	98.62	98.23	97.30	96.27	95.43
23	254.44	99.11	98.45	97.56	96.66	96.36	95.52
24	256.09	99.34	98.41	97.46	96.76	96.12	95.37
Avg.	258.54	99.37	98.58	97.72	96.87	96.02	95.19
Med.	259.16	99.39	98.55	97.76	96.87	96.05	95.26
st dev	2.22	0.16	0.18	0.24	0.28	0.42	0.49
Min.	254.44	99.11	98.26	97.33	96.21	95.15	94.30
Max.	260.94	99.61	98.90	98.23	97.30	96.67	95.99

3.5 Data Set 2, 105°C, 22mA (Forward Voltage)

No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
13	69.87	69.78	69.69	69.53	69.45	69.30	69.26
14	69.73	69.60	69.45	69.36	69.17	69.03	69.04
15	69.89	69.71	69.60	69.50	69.44	69.34	69.28
16	69.66	69.58	69.44	69.38	69.09	69.06	68.99
17	69.83	69.74	69.49	69.40	69.23	69.08	68.99
18	69.95	69.64	69.54	69.48	69.31	69.25	69.14
19	69.84	69.67	69.53	69.46	69.33	69.25	69.12
20	69.90	69.78	69.68	69.53	69.43	69.36	69.26
21	69.91	69.76	69.61	69.55	69.46	69.34	69.24
22	69.73	69.59	69.36	69.27	69.21	69.10	68.92
23	69.64	69.51	69.41	69.32	69.20	69.10	69.05
24	69.79	69.66	69.45	69.26	69.10	69.03	68.83
Avg.	69.81	69.67	69.52	69.42	69.29	69.19	69.09
Med.	69.84	69.67	69.51	69.43	69.27	69.18	69.09
st dev	0.10	0.09	0.11	0.10	0.14	0.13	0.15
Min.	69.64	69.51	69.36	69.26	69.09	69.03	68.83
Max.	69.95	69.78	69.69	69.55	69.46	69.36	69.28

3.6 Data Set 2, 105°C, 22mA (Chromaticity Shift)

No.	u'	v'	CCT(K)	Chromaticity Shift ($\Delta u'v'$)					
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
13	0.2600	0.5242	2766	0.0002	0.0003	0.0005	0.0007	0.0010	0.0012
14	0.2579	0.5220	2824	0.0002	0.0005	0.0008	0.0012	0.0014	0.0016
15	0.2582	0.5215	2818	0.0004	0.0005	0.0008	0.0009	0.0011	0.0013
16	0.2593	0.5241	2782	0.0002	0.0003	0.0007	0.0010	0.0012	0.0015
17	0.2586	0.5230	2802	0.0004	0.0008	0.0010	0.0014	0.0017	0.0019
18	0.2586	0.5223	2806	0.0004	0.0007	0.0009	0.0011	0.0013	0.0016
19	0.2599	0.5246	2766	0.0003	0.0007	0.0009	0.0012	0.0014	0.0018
20	0.2573	0.5218	2838	0.0003	0.0006	0.0009	0.0011	0.0013	0.0015
21	0.2586	0.5229	2804	0.0004	0.0007	0.0009	0.0012	0.0016	0.0019
22	0.2594	0.5238	2782	0.0004	0.0007	0.0010	0.0012	0.0015	0.0017
23	0.2595	0.5239	2778	0.0005	0.0007	0.0009	0.0012	0.0014	0.0016
24	0.2593	0.5243	2782	0.0005	0.0009	0.0013	0.0016	0.0018	0.0022
Avg.	0.2589	0.5232	2796	0.0004	0.0006	0.0009	0.0012	0.0014	0.0017
Med.	0.2590	0.5234	2792	0.0004	0.0007	0.0009	0.0012	0.0014	0.0016
st dev	0.0008	0.0011	23	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003
Min.	0.2573	0.5215	2766	0.0002	0.0003	0.0005	0.0007	0.0010	0.0012
Max.	0.2600	0.5246	2838	0.0005	0.0009	0.0013	0.0016	0.0018	0.0022

3.7 Data Set 3, 115°C, 22mA (Lumen Maintenance)

No.	Φ(lm)	Lumen Maintenance (%)					
	Ohr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
25	252.27	99.44	98.43	97.82	97.02	95.88	94.61
26	253.67	99.37	98.60	97.99	96.87	95.79	94.74
27	256.22	98.81	97.78	97.16	96.12	95.08	93.80
28	250.99	99.44	98.58	97.46	96.48	95.29	94.59
29	259.79	99.51	97.89	96.77	95.60	94.63	93.53
30	260.05	98.97	98.28	97.07	96.06	95.43	94.59
31	258.52	99.46	98.27	97.15	96.03	94.95	94.00
32	255.97	98.45	97.55	96.86	96.12	95.36	94.50
33	254.44	99.37	98.36	97.31	96.46	95.77	94.77
34	260.56	99.41	98.23	97.28	96.35	95.53	94.52
35	257.50	99.50	98.77	97.74	97.11	96.11	95.08
36	258.26	99.56	98.50	97.46	96.91	95.83	94.80
Avg.	256.52	99.27	98.27	97.34	96.43	95.47	94.46
Med.	256.86	99.43	98.32	97.30	96.41	95.48	94.59
st dev	3.15	0.34	0.36	0.37	0.47	0.43	0.45
Min.	250.99	98.45	97.55	96.77	95.60	94.63	93.53
Max.	260.56	99.56	98.77	97.99	97.11	96.11	95.08

3.8 Data Set 3, 115°C, 22mA (Forward Voltage)

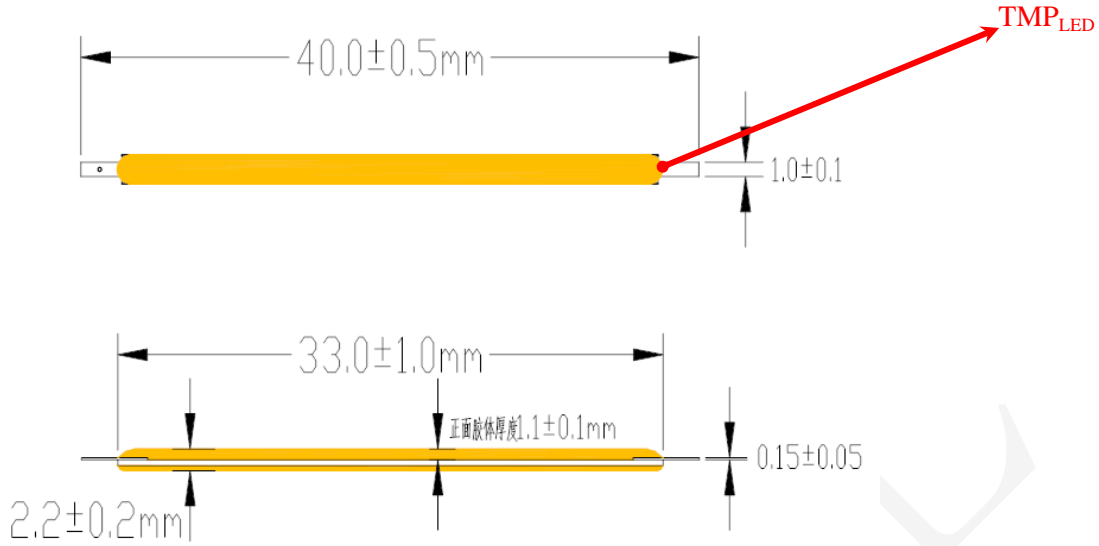
No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
25	69.63	69.51	69.29	69.12	69.06	69.00	68.82
26	69.92	69.82	69.71	69.49	69.26	69.14	69.03
27	69.82	69.53	69.49	69.17	69.06	68.90	68.77
28	69.73	69.65	69.44	69.20	69.02	68.93	68.89
29	69.89	69.78	69.42	69.29	69.16	68.98	68.99
30	69.67	69.42	69.36	69.29	69.16	69.16	68.90
31	69.99	69.84	69.60	69.50	69.34	69.21	68.99
32	70.10	69.69	69.51	69.38	69.29	69.07	69.10
33	69.77	69.62	69.53	69.27	69.22	69.12	69.09
34	70.08	69.95	69.85	69.73	69.63	69.55	69.45
35	69.89	69.78	69.67	69.53	69.42	69.29	69.14
36	69.77	69.66	69.58	69.49	69.32	69.16	69.12
Avg.	69.86	69.69	69.54	69.37	69.25	69.13	69.02
Med.	69.86	69.68	69.52	69.34	69.24	69.13	69.01
st dev	0.15	0.15	0.16	0.18	0.17	0.18	0.18
Min.	69.63	69.42	69.29	69.12	69.02	68.90	68.77
Max.	70.10	69.95	69.85	69.73	69.63	69.55	69.45

3.9 Data Set 3, 115°C, 22mA (Chromaticity Shift)

No.	u'	v'	CCT(K)	Chromaticity Shift ($\Delta u'v'$)					
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
25	0.2590	0.5238	2790	0.0003	0.0007	0.0010	0.0012	0.0014	0.0018
26	0.2598	0.5237	2774	0.0003	0.0006	0.0010	0.0014	0.0017	0.0019
27	0.2593	0.5241	2782	0.0004	0.0006	0.0012	0.0015	0.0018	0.0021
28	0.2590	0.5230	2794	0.0005	0.0009	0.0011	0.0015	0.0017	0.0021
29	0.2576	0.5212	2834	0.0003	0.0009	0.0012	0.0016	0.0017	0.0020
30	0.2578	0.5211	2830	0.0006	0.0007	0.0009	0.0011	0.0014	0.0017
31	0.2596	0.5248	2772	0.0002	0.0007	0.0009	0.0012	0.0016	0.0020
32	0.2598	0.5235	2774	0.0008	0.0010	0.0013	0.0016	0.0019	0.0018
33	0.2597	0.5239	2774	0.0004	0.0006	0.0009	0.0011	0.0012	0.0015
34	0.2594	0.5240	2782	0.0002	0.0005	0.0007	0.0010	0.0012	0.0015
35	0.2594	0.5241	2780	0.0002	0.0004	0.0006	0.0008	0.0011	0.0015
36	0.2575	0.5225	2830	0.0003	0.0005	0.0009	0.0011	0.0015	0.0016
Avg.	0.2590	0.5233	2793	0.0004	0.0007	0.0010	0.0013	0.0015	0.0018
Med.	0.2594	0.5238	2782	0.0003	0.0007	0.0010	0.0012	0.0015	0.0018
st dev	0.0009	0.0012	24	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002
Min.	0.2575	0.5211	2772	0.0002	0.0004	0.0006	0.0008	0.0011	0.0015
Max.	0.2598	0.5248	2834	0.0008	0.0010	0.0013	0.0016	0.0019	0.0021

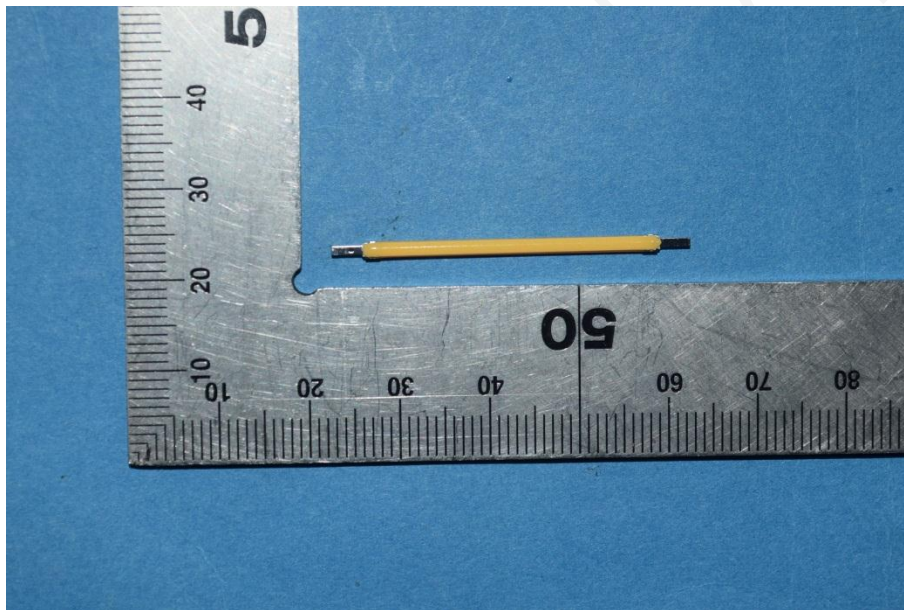
4 - DUT Photo

4.1 Mechanical Dimensions



All dimensions are in millimeter

4.2 DUT Photo



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