



IESNA LM-80-2008

6000 Hours Measurement and Test Report
for

Shenzhen LvMing Photoelectric Co.,Ltd
5F jingdiao Industrial Zone,92# Xing hu Road,RedStar Community,
Gong ming Town,Guang ming Area,Shen Zhen

Product Name:	light-emitting diode
Model No:	LM2833V02CN
Tested By:	
Report No:	BST160408936
Test Date:	07/01/2015 to 03/18/2016
Revision Date:	March 18, 2016
Test Completion Date:	March 18, 2016
Reviewed By:	TOMSEN
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Note: 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 Shenzhen BST Technology Co., Ltd.

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1-GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

Applicant	:	Shenzhen LvMing Photoelectric Co.,Ltd
Model Name	:	LM2835W0.2W
Model Number	:	LM2835W0.2W
Number of LED Light Source tested	:	See tables.
Operating Cycle	:	Constant current.
Ambient Conditions	:	LED packages are operated in environmental control chambers .The temperature of the ambient air around the LED packages is actively controlled by air flowing through the chamber. TA:See tables; RH:<45% ; Air flow:300CFM
Case temperature (test point temperature)	:	See tables.
Drive current of the LED light source during lifetime test	:	See tables.
Initial luminous flux and forward voltage at photometric measurement current	:	See tables.
Lumen maintenance data for each individual LED light source along with median value, standard deviation, minimum and maximum lumen maintenance value for all of the LED Light sources	:	See tables.
Observation of LED light source failure including the failure conditions and time of failure.	:	See tables.
LED light source monitoring interval	:	The LED light source are inspected at regular interval (24 hours) throughout the 6000 hours test.
Photometric measurement uncertainty	:	± 1.5 on flux measurements for LM-80 testing.
Chromaticity shift reported over the Measurement time	:	See tables.
LED Light Source Test interval	:	At regular intervals(1000 hours) throughout the 6000 hours test.
Date of Receiving Sample	:	2015-06-29
Test Duration	:	07/01/2015 to 03/18/2016

1.2 Objective

The following test report is prepared on behalf of Chung Hing industry Co.,Ltd in accordance with IESNA LM-80-08, used the following American National Standards or illumination Engineering Society of North America test guides:

Measurement of LEDs(2nd ed.), CIE 127; IESNA Testing Procedures Committee . IESNA LM-79-2008 Approved Method for the Electrical and Photometric Measurements of LED Light Sources, New York: Illuminating Engineering Society of North American,2008.

ASSIST Recommends:LED Life Testing. Vol.1-6,2005. Lighting Research Center, Rensselaer Polytechnic Institute, Troy,NY,2005. ANSI/IESNA Testing Procedures Committee,IESNA RP-16-07,Nomenclature and Definitions for Illuminating Engineering. See also Addendum A on solid-state lighting (Document is now continuously updated)

IESNA Testing Procedures Committee,IESNA LM-40-01,Approved Method for Life Performance Testing of Fluorescent Lamps, New York :Illuminating Engineering Society of North American,2001.

1.3 Test Facility Description

The Energy Efficiency Lab used by BST to collect energy efficiency measurement data is located in Building No.23-24,Zhiheng Industrial Park,Guankouer Road,Nantou,Nanshan District,Shenzhen,Guangdong,China. Shenzhen BST Technology Co., Ltd.is a EPA recognized lab for lighting products,

1.4 Test Equipment List

Apparatus List	Device	Cal.Date	Cal Due Date
1	Integral Sphere + Spectroradiometer	Calibrated before Test	
2	Standard Light Source	Mar 09,2016	Mar 08,2017
3	Source Meter	Oct 16,2015	Oct 15,2016
4	Temperature Chamber	Sep 17,2015	Sep 16,2016
5	Multi Channel LED Aging Source	Sep 17,2015	Sep 16,2016
6	6 ^{1/2} Digital Multimeter	Mar 28,2015	Mar 27,2016
7	Temperature Controller	Oct 16,2015	Oct 15,2016
8	Second Meter	Oct 16,2015	Oct 15,2016

Statement of Traceability: Shenzhen BST Technology Co., Ltd. Certifies that all calibration has been performed using suitable standards traceable to the NIM China.

2- Summary of Test Result

Data Set:	Data Set 1, 55°C, 60mA
Number of Units:	25
Failures Observed:	0
Test Interval and Test Duration:	0h,1000h,2000h,3000h,4000h,5000h,6000h
Average. Lumen Maintenance at 6000 hours:	97.5%
Average Chromaticity Shift at 6000 hours ($\Delta u'v'$):	0.0029
Reported TM-21 L₇₀ Lifetime:	>5,3000 hours

Data Set:	Data Set 1, 85°C, 60mA
Number of Units:	25
Failures Observed:	0
Test Interval and Test Duration:	0h,1000h,2000h,3000h,4000h,5000h,6000h
Average. Lumen Maintenance at 6000 hours:	99.8%
Average Chromaticity Shift at 6000 hours ($\Delta u'v'$):	0.0038
Reported TM-21 L₇₀ Lifetime:	>5,3000 hours

Data Set:	Data Set 1, 105°C, 60mA
Number of Units:	25
Failures Observed:	0
Test Interval and Test Duration:	0h,1000h,2000h,3000h,4000h,5000h,6000h
Average. Lumen Maintenance at 6000 hours:	95.3%
Average Chromaticity Shift at 6000 hours ($\Delta u'v'$):	0.0025
Reported TM-21 L₇₀ Lifetime:	>4,3000 hours

3- Test Method

3.1 Photometric and Electrical Measurement

Total light output (luminous flux) for the $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ambient temperature conditions is measured using a Labsphere 50cm 2π geometry integrating sphere. Temperature is controlled and measured at manufacture defined TMP inside the sphere. Spectral radiant flux measurements are made using Labsphere CDS 2100 to detector port of the integrating sphere. Each LED package is operated at rated drive current(CC Mode). Each should be stable before measurements are made. The determining method of stable is as follows:

Step 1 Take 3 measurements of the lamp light output at 15 minute interval (total time=30mintues.)This time period is in addition to recommended pre-burning time.

Step 2 Calculate the percent difference between the maximum measured value and the minimum measured value for the three consecutive measurements.

Step 3 if the value calculated in Step 2 does not exceed 0.5 percent, the lamp is considered stable.

Luminous flux, chromaticity coordinates, correlated color temperature and color rendering index for each lamp are calculated from the spectral radiant flux measurements taken at 2nm intervals over the range 350 to 800nm. The calibration of the sphere photometer-spectrometer system is traceable to the NIST USA. The EUT fed under CC mode at rated input by KEITHLEY 2420 power source.

The total uncertainty of the light output measurements is estimated, at the 95% confidence level, not to exceed $\pm 1.6\%$ over the wavelength range 350-800nm.

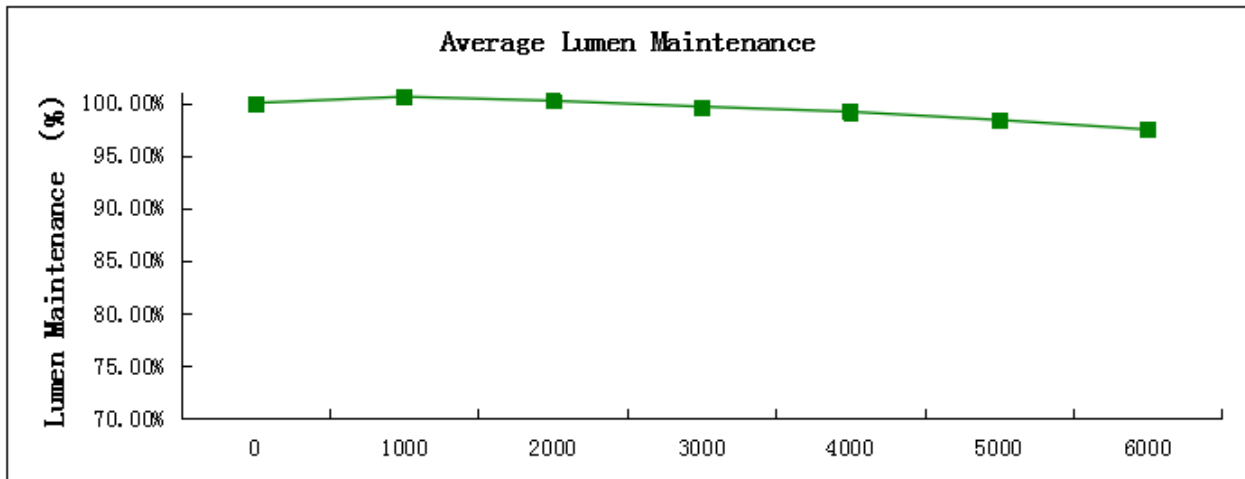
3.2 Season the LED Package from 0 hours to 6000 hours

Three ESPEC Temperature Chambers are using for Season, and the temperature is set to 55°C (manufacture defined) , 85°C , 105°C ,the airflow is minimum to keep the uniformity to temperature. LED package are operated steady state (no cycling) for a period of 9000 hours, checked the lumen flux and Chromaticity Shift every 1000 hours. The samples are inspected at regular intervals (12 hours) throughout the 6000 hours. The time and date of failure of each lamp is recorded. The actual elapsed time for each light package is in hour.

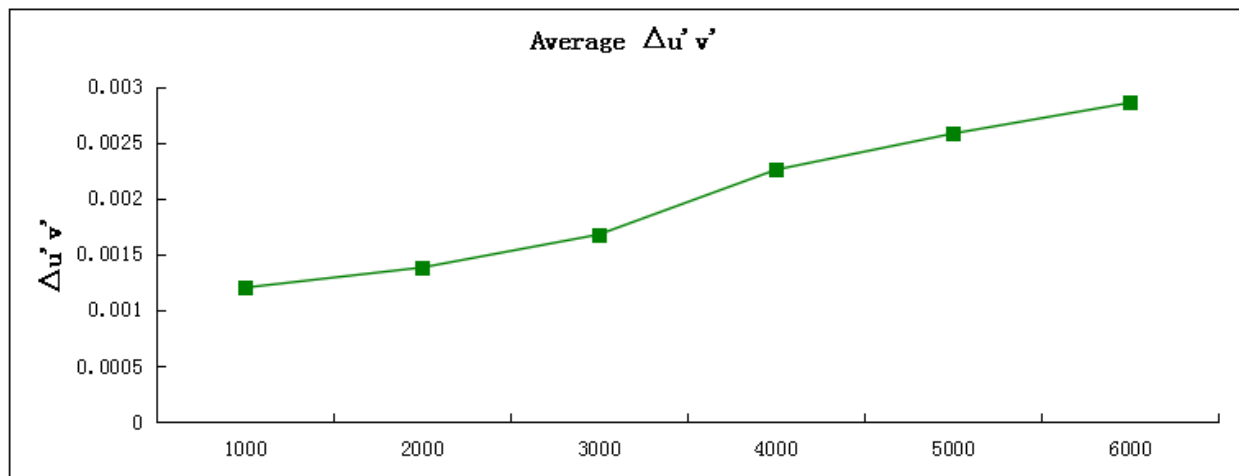
4- Data Set : 55°C ; 60mA

Description of Light Sources tested	:	LM2835W0.2W
Case Temperature	:	54.5°C
Ambient Temperature	:	53.6°C
Drive Current	:	60mA
Measure Current	:	60mA
Failures Observed	:	None

Lumen Maintenance



$\Delta u' v'$



Description of Light Sources tested	:	LM2835W0.2W
Case Temperature	:	54.5 °C
Ambient Temperature	:	53.6 °C
Drive Current	:	60mA
Measure Current	:	60mA
Failures Observed	:	None

Sample No.	V _F (V)	Φ(lm)	Lumen Maintenance (%)					
			0hr(Initial)	1000hrs	2000 hrs	3000 hrs	4000 hrs	5000 hrs
S1	2.9	27.8	100.5%	100.0%	99.8%	99.2%	98.4%	97.7%
S2	2.9	26.9	100.9%	100.6%	100.0%	99.6%	98.8%	98.0%
S3	3.0	27.4	101.3%	100.4%	100.1%	99.6%	98.7%	97.3%
S4	3.0	27.1	99.8%	100.5%	99.5%	99.0%	98.1%	97.8%
S5	3.1	26.5	100.8%	100.2%	99.2%	98.6%	98.1%	96.9%
S6	2.9	27.6	101.1%	100.6%	99.4%	99.0%	98.2%	97.9%
S7	2.9	27.3	101.3%	100.1%	99.5%	98.8%	98.0%	97.1%
S8	3.0	27.4	100.3%	100.0%	99.6%	98.8%	98.1%	97.1%
S9	3.1	27.1	100.6%	100.0%	99.6%	98.9%	98.2%	96.8%
S10	2.9	26.8	101.0%	99.9%	99.3%	98.9%	98.0%	97.5%
S11	2.9	27.4	100.3%	100.6%	99.9%	99.3%	98.4%	98.1%
S12	3.0	27.1	100.2%	99.9%	99.7%	99.0%	98.0%	96.9%
S13	3.0	26.5	100.3%	100.1%	99.9%	99.5%	98.6%	98.0%
S14	2.9	27.6	101.2%	100.1%	99.3%	99.0%	98.2%	97.0%
S15	3.1	27.3	99.8%	100.0%	99.4%	99.0%	98.4%	97.8%
S16	3.0	27.4	100.7%	100.2%	99.8%	99.5%	98.7%	97.6%
S17	3.0	27.1	101.0%	100.0%	99.4%	99.1%	98.4%	96.9%
S18	2.9	26.8	100.2%	100.4%	99.6%	99.2%	98.4%	97.8%
S19	2.9	27.0	100.2%	100.1%	99.5%	99.4%	98.6%	97.6%
S20	2.9	27.4	100.6%	100.3%	99.9%	99.4%	98.6%	97.7%
S21	3.0	27.2	100.4%	100.6%	99.7%	99.1%	98.6%	98.0%
S22	3.1	27.1	99.7%	100.5%	100.0%	99.4%	98.4%	97.2%
S23	2.9	27.7	100.9%	100.6%	100.0%	99.7%	98.9%	98.1%
S24	2.9	27.2	100.8%	99.9%	99.7%	99.0%	98.3%	97.5%
S25	3.0	27.5	100.5%	99.9%	99.7%	99.3%	98.6%	97.0%
Avg.	3.0	27.2	100.6%	100.2%	99.7%	99.2%	98.4%	97.5%
MIN	2.9	26.5	99.7%	99.9%	99.2%	98.6%	98.0%	96.8%
MAX	3.1	27.8	101.3%	100.6%	100.1%	99.7%	98.9%	98.1%
STDEV	0.1	0.3	0.46%	0.28%	0.26%	0.29%	0.26%	0.43%
N	25	25	25	25	25	25	25	25

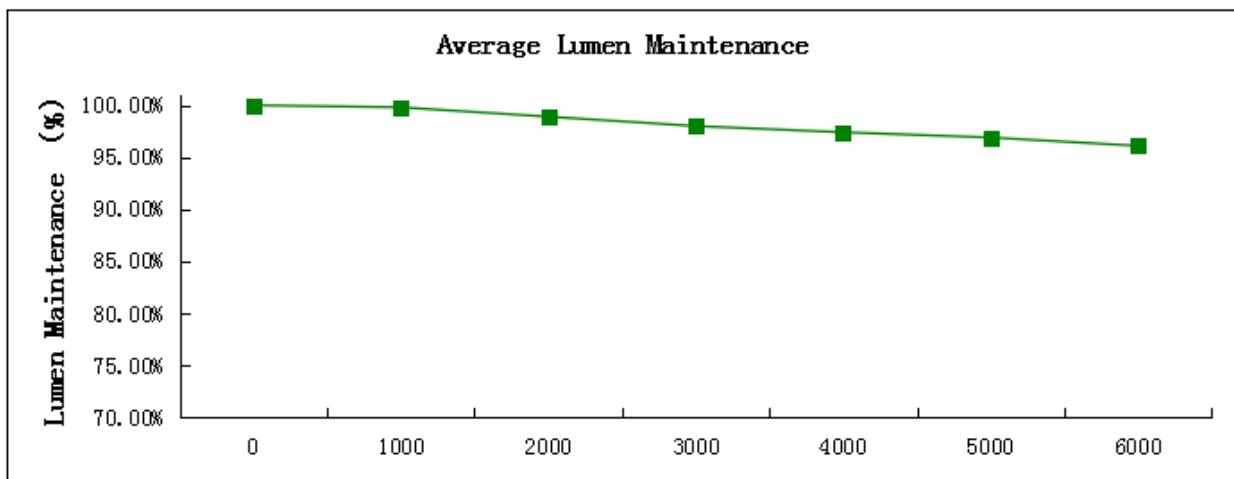
Description of Light Sources tested	:	LM2835W0.2W
Case Temperature	:	54.5℃
Ambient Temperature	:	53.6℃
Drive Current	:	60mA
Measure Current	:	60mA
Failures Observed	:	None

Sample No.	u'	v'	CCT(K)	Chromaticity Shift ($\Delta u'v'$)					
	0hr(Initial)			1000 hrs	2000 hrs	3000 hrs	4000 hrs	5000 hrs	6000 hrs
S1	0.2427	0.5247	3117	0.0007	0.0011	0.0018	0.0023	0.0026	0.0029
S2	0.2422	0.5253	3148	0.0007	0.0012	0.0014	0.0020	0.0023	0.0026
S3	0.2407	0.5221	3249	0.0010	0.0015	0.0017	0.0024	0.0027	0.0033
S4	0.2424	0.5254	3179	0.0012	0.0012	0.0017	0.0023	0.0027	0.0029
S5	0.2418	0.5217	3224	0.0011	0.0011	0.0017	0.0023	0.0026	0.0027
S6	0.2436	0.5242	3224	0.0011	0.0012	0.0015	0.0021	0.0024	0.0026
S7	0.2436	0.5242	3156	0.0013	0.0020	0.0026	0.0033	0.0035	0.0037
S8	0.2414	0.5188	3260	0.0013	0.0013	0.0020	0.0025	0.0032	0.0034
S9	0.2414	0.5179	3268	0.0012	0.0013	0.0016	0.0023	0.0028	0.0031
S10	0.2431	0.5258	3159	0.0014	0.0012	0.0015	0.0022	0.0026	0.0030
S11	0.2449	0.5289	3091	0.0012	0.0013	0.0017	0.0023	0.0030	0.0032
S12	0.2430	0.5267	3154	0.0012	0.0011	0.0014	0.0020	0.0027	0.0031
S13	0.2430	0.5268	3152	0.0012	0.0009	0.0014	0.0020	0.0023	0.0029
S14	0.2417	0.5243	3206	0.0013	0.0016	0.0014	0.0018	0.0021	0.0023
S15	0.2426	0.5235	3189	0.0010	0.0013	0.0017	0.0020	0.0021	0.0022
S16	0.2418	0.5236	3208	0.0012	0.0016	0.0016	0.0023	0.0027	0.0028
S17	0.2423	0.5242	3190	0.0013	0.0018	0.0021	0.0028	0.0027	0.0032
S18	0.2427	0.5211	3205	0.0011	0.0013	0.0020	0.0025	0.0028	0.0030
S19	0.2426	0.5211	3206	0.0011	0.0014	0.0016	0.0022	0.0024	0.0027
S20	0.2418	0.5224	3208	0.0014	0.0014	0.0016	0.0023	0.0026	0.0029
S21	0.2424	0.5247	3184	0.0011	0.0014	0.0012	0.0015	0.0019	0.0023
S22	0.2432	0.5260	3154	0.0013	0.0014	0.0017	0.0020	0.0025	0.0029
S23	0.2430	0.5258	3161	0.0012	0.0015	0.0016	0.0023	0.0024	0.0024
S24	0.2429	0.5248	3169	0.0014	0.0015	0.0018	0.0022	0.0023	0.0026
S25	0.2433	0.5239	3169	0.0014	0.0019	0.0016	0.0025	0.0026	0.0027
AV	0.2426	0.5239	3185	0.0012	0.0014	0.0017	0.0023	0.0026	0.0029
MIN	0.2407	0.5179	3091	0.0007	0.0009	0.0012	0.0015	0.0019	0.0022
MAX	0.2449	0.5289	3268	0.0014	0.0020	0.0026	0.0033	0.0035	0.0037
STDEV	0.0009	0.0025	42	0.0002	0.0003	0.0003	0.0003	0.0003	0.0004
N	25	25	25	25	25	25	25	25	25

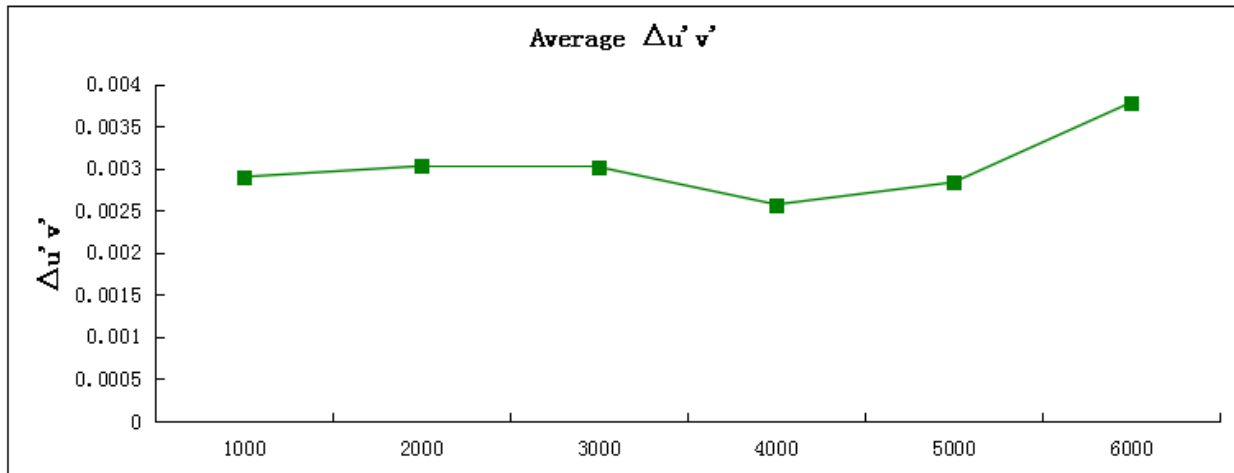
5- Data Set 2: 85°C ; 60mA

Description of Light Sources tested	:	LM2835W0.2W
Case Temperature	:	84.6°C
Ambient Temperature	:	83.3°C
Drive Current	:	60mA
Measure Current	:	60mA
Failures Observed	:	None

Lumen Maintenance



$\Delta u' v'$



Description of Light Sources tested	:	LM2835W0.2W
Case Temperature	:	84.6℃
Ambient Temperature	:	83.3℃
Drive Current	:	60mA
Measure Current	:	60mA
Failures Observed	:	None

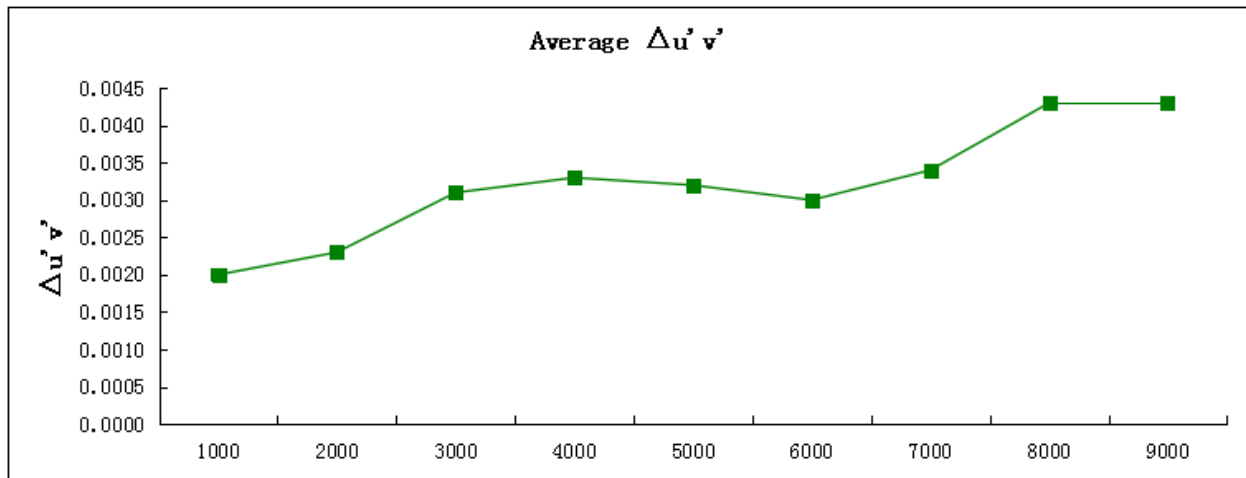
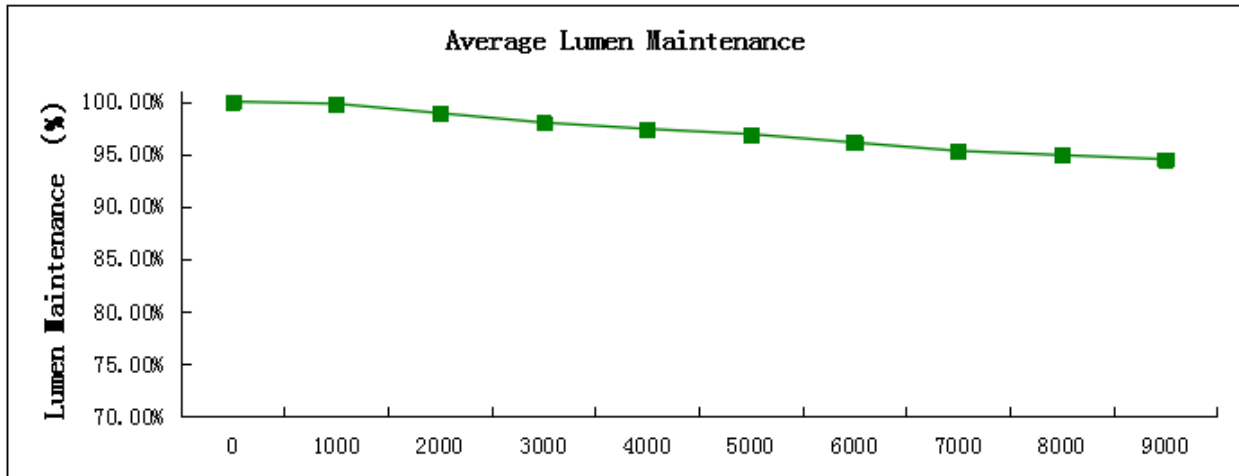
Sample No.	V _F (V)	Φ(lm)	Lumen Maintenance (%)					
			0hr(Initial)	1000hrs	2000 hrs	3000 hrs	4000 hrs	5000 hrs
S26	3.0	27.0	99.4%	98.7%	97.4%	96.7%	96.3%	96.0%
S27	2.9	26.6	100.2%	98.3%	98.0%	97.4%	96.8%	95.9%
S28	3.0	27.4	100.9%	99.0%	97.9%	97.3%	96.7%	95.4%
S29	3.0	27.2	99.6%	99.2%	98.0%	97.5%	97.0%	96.8%
S30	2.9	26.8	100.5%	99.3%	98.5%	98.0%	97.5%	96.3%
S31	3.0	26.1	99.9%	99.3%	98.5%	97.9%	97.3%	96.4%
S32	3.0	26.7	100.1%	99.4%	98.5%	97.8%	97.4%	95.6%
S33	3.1	27.0	99.7%	98.6%	97.9%	97.2%	96.6%	96.5%
S34	3.0	27.5	99.8%	98.7%	98.0%	97.2%	96.6%	96.6%
S35	2.9	26.6	99.2%	98.5%	97.6%	97.0%	96.4%	96.2%
S36	2.9	27.1	100.1%	99.2%	98.3%	97.4%	97.0%	96.5%
S37	3.0	26.8	99.6%	98.7%	98.0%	97.3%	96.8%	95.8%
S38	3.0	26.2	100.1%	99.4%	98.3%	97.2%	96.6%	95.7%
S39	3.1	27.3	100.5%	98.8%	97.9%	97.2%	96.7%	96.9%
S40	3.1	27.0	99.2%	98.3%	97.5%	97.0%	96.5%	96.0%
S41	3.0	27.1	99.2%	98.3%	97.6%	97.0%	96.4%	95.7%
S42	3.0	26.8	99.1%	98.5%	97.7%	97.1%	96.8%	96.0%
S43	3.0	26.5	99.7%	98.8%	98.2%	97.7%	97.4%	95.6%
S44	2.9	26.7	100.5%	99.7%	98.5%	97.6%	97.2%	95.5%
S45	2.9	27.1	99.5%	98.0%	97.1%	96.5%	96.3%	95.3%
S46	3.1	26.9	100.1%	99.4%	98.8%	98.2%	97.7%	96.4%
S47	3.0	26.8	99.6%	98.8%	98.1%	97.4%	96.8%	96.8%
S48	3.0	27.4	99.7%	99.3%	98.4%	97.6%	97.1%	96.5%
S49	2.9	26.9	100.1%	98.9%	98.1%	97.4%	96.8%	96.1%
S50	3.0	27.2	99.6%	98.8%	98.3%	97.4%	96.9%	95.7%
Avg.	3.0	26.9	99.8%	98.9%	98.0%	97.4%	96.9%	96.1%
MIN	2.9	26.1	99.1%	98.0%	97.1%	96.5%	96.3%	95.3%
MAX	3.1	27.5	100.9%	99.7%	98.8%	98.2%	97.7%	96.9%
STDEV	0.1	0.3	0.47%	0.43%	0.41%	0.39%	0.39%	0.46%
N	25	25	25	25	25	25	25	25

Description of Light Sources tested	:	LM2835W0.2W
Case Temperature	:	84.6℃
Ambient Temperature	:	83.3℃
Drive Current	:	60mA
Measure Current	:	60mA
Failures Observed	:	None

Sample No.	u'	v'	CCT(K)	Chromaticity Shift ($\Delta u'v'$)					
	0hr(Initial)			1000 hrs	2000 hrs	3000 hrs	4000 hrs	5000 hrs	6000 hrs
S26	0.2427	0.5247	3117	0.0001	0.0001	0.0005	0.0011	0.0013	0.0039
S27	0.2422	0.5253	3148	0.0032	0.0033	0.0030	0.0025	0.0027	0.0035
S28	0.2407	0.5221	3249	0.0035	0.0037	0.0039	0.0037	0.0039	0.0041
S29	0.2424	0.5254	3179	0.0040	0.0042	0.0044	0.0034	0.0036	0.0036
S30	0.2418	0.5217	3224	0.0002	0.0003	0.0002	0.0012	0.0013	0.0035
S31	0.2436	0.5242	3224	0.0035	0.0035	0.0029	0.0018	0.0021	0.0029
S32	0.2436	0.5242	3156	0.0032	0.0037	0.0036	0.0029	0.0031	0.0032
S33	0.2414	0.5188	3260	0.0030	0.0032	0.0034	0.0025	0.0029	0.0035
S34	0.2414	0.5179	3268	0.0018	0.0017	0.0012	0.0001	0.0014	0.0024
S35	0.2431	0.5258	3159	0.0031	0.0033	0.0032	0.0029	0.0028	0.0039
S36	0.2449	0.5289	3091	0.0035	0.0036	0.0039	0.0031	0.0032	0.0041
S37	0.2430	0.5267	3154	0.0038	0.0038	0.0033	0.0025	0.0027	0.0043
S38	0.2430	0.5268	3152	0.0031	0.0034	0.0036	0.0031	0.0034	0.0039
S39	0.2417	0.5243	3206	0.0036	0.0040	0.0042	0.0039	0.0037	0.0047
S40	0.2426	0.5235	3189	0.0032	0.0035	0.0037	0.0043	0.0044	0.0047
S41	0.2418	0.5236	3208	0.0022	0.0022	0.0015	0.0007	0.0013	0.0015
S42	0.2423	0.5242	3190	0.0030	0.0031	0.0034	0.0027	0.0029	0.0034
S43	0.2427	0.5211	3205	0.0024	0.0025	0.0027	0.0019	0.0023	0.0037
S44	0.2426	0.5211	3206	0.0032	0.0038	0.0036	0.0046	0.0048	0.0053
S45	0.2418	0.5224	3208	0.0033	0.0032	0.0041	0.0039	0.0042	0.0047
S46	0.2424	0.5247	3184	0.0026	0.0024	0.0018	0.0010	0.0014	0.0038
S47	0.2432	0.5260	3154	0.0036	0.0037	0.0041	0.0034	0.0036	0.0044
S48	0.2430	0.5258	3161	0.0033	0.0032	0.0028	0.0024	0.0027	0.0038
S49	0.2429	0.5248	3169	0.0026	0.0025	0.0024	0.0012	0.0015	0.0034
S50	0.2433	0.5239	3169	0.0029	0.0038	0.0040	0.0035	0.0037	0.0044
AV	0.2426	0.5239	3185	0.0029	0.0030	0.0030	0.0026	0.0028	0.0038
MIN	0.2407	0.5179	3091	0.0001	0.0001	0.0002	0.0001	0.0013	0.0015
MAX	0.2449	0.5289	3268	0.0040	0.0042	0.0044	0.0046	0.0048	0.0053
STDEV	0.0009	0.0025	42	0.0010	0.0010	0.0012	0.0012	0.0010	0.0008
N	25	25	25	25	25	25	25	25	25

6- Data Set 3: 105°C ; 60mA

Description of Light Sources tested	:	LM2835W0.2W
Case Temperature	:	103.8°C
Ambient Temperature	:	103.7°C
Drive Current	:	60mA
Measure Current	:	60mA
Failures Observed	:	None



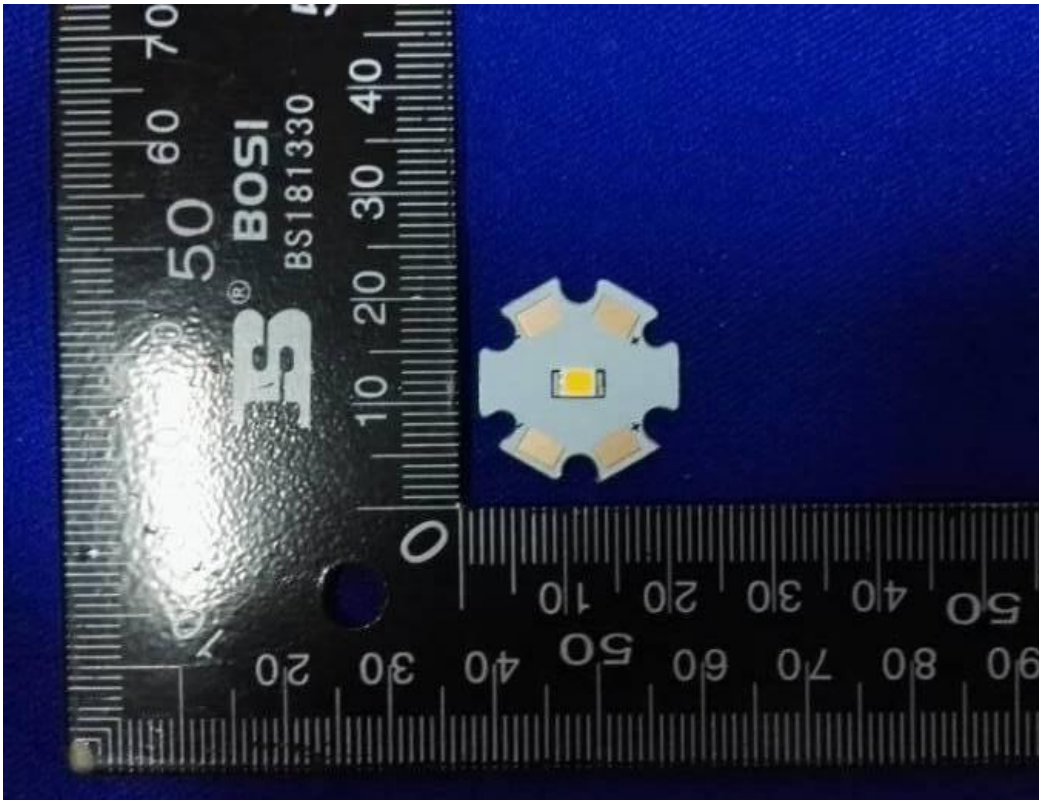
Description of Light Sources tested	:	LM2835W0.2W
Case Temperature	:	103.8℃
Ambient Temperature	:	103.7℃
Drive Current	:	60mA
Measure Current	:	60mA
Failures Observed	:	None

Sample No.	V _F (V)	Φ(lm)	Lumen Maintenance (%)					
			0hr(Initial)	1000hrs	2000 hrs	3000 hrs	4000 hrs	5000 hrs
S51	3.1	27.3	98.7%	97.4%	96.7%	96.3%	95.5%	95.0%
S52	2.9	26.9	98.3%	98.0%	97.4%	96.8%	95.9%	94.8%
S53	2.9	27.7	99.0%	97.9%	97.3%	96.7%	95.8%	95.0%
S54	2.9	27.5	99.2%	98.0%	97.5%	97.0%	96.3%	94.7%
S55	3.0	27.1	99.3%	98.5%	98.0%	97.5%	96.9%	95.7%
S56	2.9	26.4	99.3%	98.5%	97.9%	97.3%	96.4%	94.6%
S57	3.0	27.0	99.4%	98.5%	97.8%	97.4%	96.5%	95.1%
S58	3.0	27.3	98.6%	97.9%	97.2%	96.6%	96.1%	94.8%
S59	2.9	27.8	98.7%	98.0%	97.2%	96.6%	95.9%	95.3%
S60	3.1	26.9	98.5%	97.6%	97.0%	96.4%	95.8%	95.4%
S61	2.9	27.4	99.2%	98.3%	97.4%	97.0%	96.5%	95.5%
S62	3.1	27.1	98.7%	98.0%	97.3%	96.8%	96.1%	95.0%
S63	3.0	26.5	99.4%	98.3%	97.2%	96.6%	95.8%	95.4%
S64	2.9	27.6	98.8%	97.9%	97.2%	96.7%	95.8%	95.3%
S65	2.9	27.3	98.3%	97.5%	97.0%	96.5%	95.7%	96.5%
S66	3.0	27.4	98.3%	97.6%	97.0%	96.4%	95.8%	96.2%
S67	3.0	27.1	98.5%	97.7%	97.1%	96.8%	96.1%	95.7%
S68	3.1	26.8	98.8%	98.2%	97.7%	97.4%	96.2%	94.9%
S69	2.9	27.0	99.7%	98.5%	97.6%	97.2%	96.3%	95.7%
S70	2.9	27.4	98.0%	97.1%	96.5%	96.3%	95.5%	95.2%
S71	3.0	27.2	99.4%	98.8%	98.2%	97.7%	96.8%	95.3%
S72	2.9	27.1	98.8%	98.1%	97.4%	96.8%	96.2%	94.9%
S73	2.9	27.7	99.3%	98.4%	97.6%	97.1%	96.3%	95.7%
S74	2.9	27.2	98.9%	98.1%	97.4%	96.8%	95.8%	95.3%
S75	3.0	27.5	98.8%	98.3%	97.4%	96.9%	95.9%	95.1%
Avg.	3.0	27.2	98.9%	98.0%	97.4%	96.9%	96.1%	95.3%
MIN	2.9	26.4	98.0%	97.1%	96.5%	96.3%	95.5%	94.6%
MAX	3.1	27.8	99.7%	98.8%	98.2%	97.7%	96.9%	96.5%
STDEV	0.1	0.3	0.43%	0.41%	0.39%	0.39%	0.37%	0.46%
N	25	25	25	25	25	25	25	25

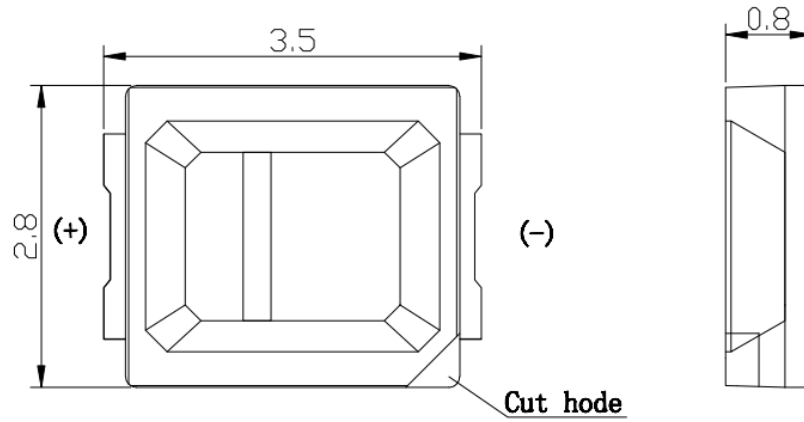
Description of Light Sources tested	:	LM2835W0.2W
Case Temperature	:	103.8°C
Ambient Temperature	:	103.7°C
Drive Current	:	60mA
Measure Current	:	60mA
Failures Observed	:	None

Sample No.	u'	v'	CCT(K)	Chromaticity Shift ($\Delta u'v'$)					
	0hr(Initial)			1000 hrs	2000 hrs	3000 hrs	4000 hrs	5000 hrs	6000 hrs
S51	0.2427	0.5247	3117	0.0009	0.0011	0.0013	0.0018	0.0019	0.0020
S52	0.2422	0.5253	3148	0.0007	0.0011	0.0014	0.0020	0.0021	0.0023
S53	0.2407	0.5221	3249	0.0010	0.0011	0.0012	0.0017	0.0017	0.0021
S54	0.2424	0.5254	3179	0.0011	0.0012	0.0015	0.0021	0.0023	0.0023
S55	0.2418	0.5217	3224	0.0004	0.0008	0.0013	0.0016	0.0021	0.0021
S56	0.2436	0.5242	3224	0.0006	0.0010	0.0011	0.0017	0.0018	0.0021
S57	0.2436	0.5242	3156	0.0010	0.0012	0.0021	0.0023	0.0017	0.0021
S58	0.2414	0.5188	3260	0.0009	0.0012	0.0026	0.0029	0.0032	0.0032
S59	0.2414	0.5179	3268	0.0012	0.0016	0.0015	0.0020	0.0027	0.0030
S60	0.2431	0.5258	3159	0.0010	0.0009	0.0015	0.0020	0.0022	0.0023
S61	0.2449	0.5289	3091	0.0010	0.0012	0.0013	0.0020	0.0022	0.0022
S62	0.2430	0.5267	3154	0.0007	0.0012	0.0011	0.0017	0.0021	0.0022
S63	0.2430	0.5268	3152	0.0008	0.0011	0.0011	0.0017	0.0020	0.0022
S64	0.2417	0.5243	3206	0.0009	0.0014	0.0012	0.0019	0.0024	0.0026
S65	0.2426	0.5235	3189	0.0010	0.0012	0.0013	0.0019	0.0022	0.0026
S66	0.2418	0.5236	3208	0.0009	0.0013	0.0014	0.0019	0.0021	0.0024
S67	0.2423	0.5242	3190	0.0012	0.0012	0.0030	0.0034	0.0037	0.0040
S68	0.2427	0.5211	3205	0.0010	0.0015	0.0017	0.0021	0.0022	0.0025
S69	0.2426	0.5211	3206	0.0006	0.0010	0.0015	0.0018	0.0023	0.0027
S70	0.2418	0.5224	3208	0.0010	0.0011	0.0014	0.0021	0.0025	0.0027
S71	0.2424	0.5247	3184	0.0009	0.0012	0.0015	0.0020	0.0027	0.0030
S72	0.2432	0.5260	3154	0.0008	0.0016	0.0011	0.0015	0.0020	0.0021
S73	0.2430	0.5258	3161	0.0010	0.0013	0.0015	0.0021	0.0026	0.0029
S74	0.2429	0.5248	3169	0.0009	0.0009	0.0015	0.0022	0.0024	0.0026
S75	0.2433	0.5239	3169	0.0013	0.0011	0.0016	0.0023	0.0025	0.0028
AV	0.2426	0.5239	3185	0.0009	0.0012	0.0015	0.0020	0.0023	0.0025
MIN	0.2407	0.5179	3091	0.0004	0.0008	0.0011	0.0015	0.0017	0.0020
MAX	0.2449	0.5289	3268	0.0013	0.0016	0.0030	0.0034	0.0037	0.0040
STDEV	0.0009	0.0025	42	0.0002	0.0002	0.0005	0.0004	0.0004	0.0005
N	25	25	25	25	25	25	25	25	25

7-EUT Photos



8-Mechanical Dimensions (Ta = 25 °C)



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