



ZHEJIANG WEIWEI OPTOELECTRONIC TECHNOLOGY CO., LTD

TEST REPORT

Prepared For:	ZHEJIANG WEIWEI OPTOELECTRONIC TECHNOLOGY CO., LTD No. 2 Jinli Road, Economic Development Zone, Haining City, Zhejiang.
Product Name:	SMD 2835 6V 60MA
Model :	2835
Prepared By :	Shenzhen BST Technology Co., Ltd. Building No.23-24, Zhiheng industrial park, Guankouer Road, Nantou, Nanshan District, Shenzhen, Guangdong, China.
Test Date:	Sep. 24, 2013 – Jul. 25, 2014
Date of Report :	Jul. 29, 2014
Report No.:	SHBST2014072403YSR-2



TEST REPORT	
LUMEN MAINTENANCE TESTING ACCORDING TO THE IESNA LM-80-08 TEST STANDARD	
Testing laboratory	: Shenzhen BST Technology Co., Ltd.
Address	: Building No.23-24, Zhiheng industrial park, Guankouer Road, Nantou, Nanshan District, Shenzhen, Guangdong, China.
Testing location	: Shenzhen BST Technology Co., Ltd.
Applicant	: ZHEJIANG WEIWEI OPTOELECTRONIC TECHNOLOGY CO., LTD
Address	: No. 2 Jinli Road, Economic Development Zone, Haining City, Zhejiang.
Test Procedure	: The IESNA LM-80-2008: Measuring Lumen Maintenance of LED Light Sources.
Non-standard test method	: N.A.
Type of test object	: SMD 2835 6V 60MA
Trademark	: COMELON
Model/type reference	: 2835
Rating	: 6-6.3V $\overline{\text{---}}$, 0.06A, 0.4W
Manufacturer	: ZHEJIANG WEIWEI OPTOELECTRONIC TECHNOLOGY CO., LTD
Address	: No. 2 Jinli Road, Economic Development Zone, Haining City, Zhejiang.



Name and address of the testing laboratory: Shenzhen BST Technology Co., Ltd.
Building No.23-24, Zhiheng industrial park,
Guankouer Road, Nantou, Nanshan District,
Shenzhen, Guangdong, China

Prepared by : Jacky Zhang
Engineer

Reviewer : CS Chan
Supervisor

Approved & Authorized Signer : Christina

Possible test case verdicts:

Test case does not apply to the test object : N(.A.)

Test object does meet the requirement : P(ass)

Test object does not meet the requirement : F(ail)

General remarks:

Throughout this report a point is used as the decimal separator. The test results presented in this report relate only to the object tested.



Test Results Summary:

Summary	I	II	III
Condition	T _s =54.6 T _A =53.8 R.H.<65% I=60mA	T _s =84.3 T _A =83.5 R.H.<65% I=60mA	T _s =104.3 T _A =104.6 R.H.<65% I=60mA
Duration(hour)	6000	6000	6000
Interval(hour)	0,1000,2000,3000,4000, 5000, 6000	0,1000,2000,3000,4000, 5000, 6000	0,1000,2000,3000,4000, 5000, 6000
Sample Size	20	20	20
Average Lumen Maintenance at 6000 hour	94.63%	92.78%	91.59%
Average Chromaticity Shift u'v' at 6000 hour	0.0018	0.0027	0.0035
Failure	0	0	0

Equipments Used for Testing:

Equipment	Model	Equipment No.
DC Power Supply	IT6122	BSTNX001
Power meter	WT210	BSTNX001
Spectroradiometer	SPEC300	BN067
0.3m Integrating Sphere	0.3m	BSTNX002



Test Data:
Operating Condition: 55 /60mA

No.	Φ (lm)	V_F (V)	Lumen maintenance (%)					
			0h(Initial)	1000h	2000h	3000h	4000h	5000h
1	43.5	6.1	99.88	99.37	99.19	98.38	96.57	94.29
2	44.5	6.0	99.28	99.13	98.45	97.26	95.37	95.14
3	45.2	6.2	99.86	99.36	98.45	98.36	95.63	95.21
4	42.1	6.0	100.15	99.24	98.41	98.23	96.71	95.21
5	45.3	6.1	100.21	99.32	98.56	97.56	96.44	95.41
6	45.1	6.0	99.87	99.65	98.67	97.62	96.37	95.15
7	45.6	6.1	99.77	99.25	98.67	97.65	96.52	94.11
8	45.2	6.2	99.87	99.11	98.36	97.32	96.72	94.23
9	42.2	6.0	99.65	99.32	98.67	97.65	94.99	95.23
10	41.3	6.1	99.33	98.65	98.41	97.32	95.33	94.14
11	44.8	6.0	99.98	99.18	98.65	97.45	95.46	94.55
12	43.6	6.1	99.35	98.33	98.23	97.25	95.12	95.26
13	44.9	6.0	99.56	99.27	99.12	97.14	95.13	94.65
14	45.2	6.1	99.69	99.18	99.08	98.14	94.86	93.46
15	43.1	6.1	99.87	99.34	98.25	97.12	94.57	95.41
16	45.3	6.0	99.65	98.59	98.75	98.05	95.28	94.15
17	44.7	6.1	99.62	99.23	98.89	96.33	95.26	94.08
18	43.8	6.0	99.63	99.37	97.98	96.55	94.33	94.26
19	44.9	6.0	99.36	99.34	98.02	95.98	94.24	93.45
20	43.7	6.1	99.36	99.06	99.12	96.71	94.28	95.28
Average	44.2	6.1	99.70	99.16	98.60	97.40	95.46	94.63
Median	44.8	6.1	99.67	99.25	98.61	97.39	95.31	94.60
St, Dev.	1.2	0.1	0.27	0.31	0.36	0.66	0.83	0.64
Max	45.6	6.2	100.21	99.65	99.19	98.38	96.72	95.41
Min	41.3	6.0	99.28	98.33	97.98	95.98	94.24	93.45



Operating Condition: 85 /60mA

No.	Φ (lm)	V_F (V)	Lumen maintenance (%)					
			0h(Initial)	1000h	2000h	3000h	4000h	5000h
1	42.3	6.1	99.33	98.15	97.33	95.33	94.33	92.56
2	43.6	6.3	99.28	98.47	97.63	95.21	93.18	92.67
3	41.5	6.2	99.47	98.56	97.25	95.23	93.56	92.63
4	42.1	6.1	99.26	97.36	96.52	95.26	94.12	92.87
5	42.6	6.1	99.54	98.25	97.05	95.11	93.56	93.26
6	43.4	6.0	99.62	97.26	97.12	95.24	93.14	92.85
7	42.8	6.1	99.36	98.57	96.52	94.26	93.02	92.66
8	41.7	6.2	99.28	98.62	96.33	94.32	93.06	92.85
9	42.2	6.0	99.52	98.28	96.45	94.27	94.12	93.62
10	41.3	6.1	99.19	98.36	95.46	94.26	93.54	92.56
11	42.1	6.2	99.15	98.26	95.32	94.21	93.52	92.77
12	43.6	6.1	99.17	98.25	96.12	94.08	93.61	92.88
13	44.2	6.0	99.52	98.33	96.14	93.74	93.54	92.56
14	45.2	6.1	99.14	97.25	96.23	94.18	93.21	92.41
15	43.1	6.1	99.87	97.33	96.21	93.06	93.23	92.76
16	43.7	6.0	99.56	97.26	95.86	93.14	93.49	93.65
17	42.3	6.1	99.25	97.65	95.84	93.12	93.54	92.55
18	43.8	6.2	99.36	98.62	96.02	94.05	93.62	92.41
19	42.2	6.0	99.25	98.26	96.13	94.11	93.11	92.56
20	43.3	6.1	99.26	98.33	96.18	94.15	93.05	92.54
Average	42.9	6.1	99.37	98.07	96.39	94.32	93.48	92.78
Median	42.7	6.1	99.31	98.26	96.22	94.24	93.53	92.67
St, Dev.	1.0	0.1	0.19	0.51	0.62	0.73	0.37	0.35
Max	45.2	6.3	99.87	98.62	97.63	95.33	94.33	93.65
Min	41.3	6.0	99.14	97.25	95.32	93.06	93.02	92.41



Operating Condition: 105 /60mA

No.	Φ (lm)	V_F (V)	Lumen maintenance (%)					
	0h(Initial)	1000h	2000h	3000h	4000h	5000h	6000h	
1	42.1	6.0	99.27	97.23	95.34	93.26	93.26	92.12
2	40.3	6.1	99.32	97.41	96.11	94.25	93.20	91.33
3	41.2	6.0	99.15	97.25	95.23	94.12	93.11	92.18
4	41.6	6.0	99.12	97.33	95.41	94.33	93.25	91.14
5	42.3	6.0	99.26	97.25	95.23	94.12	93.05	91.23
6	41.2	6.1	99.32	98.05	95.26	94.36	92.65	92.53
7	43.1	6.0	99.16	97.26	95.21	94.12	92.33	91.56
8	41.5	6.1	99.25	97.24	95.22	94.33	92.25	91.74
9	41.2	6.1	99.41	97.33	94.62	94.05	92.14	91.75
10	40.8	6.0	99.36	97.52	95.26	94.23	93.01	91.63
11	42.6	6.0	99.22	97.14	95.41	94.21	93.02	91.41
12	42.3	6.1	99.24	97.26	95.23	94.52	93.23	91.44
13	41.5	6.0	99.31	98.14	95.33	94.36	93.21	91.41
14	42.5	6.0	99.24	97.36	95.41	94.05	93.14	91.36
15	42.5	6.1	99.21	97.14	95.26	94.23	93.15	91.42
16	43.1	6.0	99.21	98.05	95.24	94.62	93.15	91.32
17	42.5	6.1	99.23	97.33	95.26	93.08	93.12	91.24
18	42.3	6.0	99.21	97.14	95.21	95.02	93.15	91.36
19	41.5	6.1	99.05	97.23	95.12	94.18	93.02	91.44
20	41.3	6.0	99.12	97.14	95.14	94.36	93.14	92.11
Average	41.9	6.0	99.23	97.39	95.28	94.19	92.98	91.59
Median	41.9	6.0	99.24	97.26	95.25	94.23	93.13	91.43
St. Dev.	0.8	0.1	0.09	0.31	0.26	0.41	0.35	0.38
Max	43.1	6.1	99.41	98.14	96.11	95.02	93.26	92.53
Min	40.3	6.0	99.05	97.14	94.62	93.08	92.14	91.14



Operating Condition: 55 /60mA

No.	x	y	Chromaticity Shift u'v'					
	0h(Initial)	1000h	2000h	3000h	4000h	5000h	6000h	
1	0.4632	0.4212	0.0006	0.0010	0.0013	0.0015	0.0015	0.0018
2	0.4625	0.4213	0.0007	0.0011	0.0013	0.0014	0.0018	0.0021
3	0.4618	0.4214	0.0008	0.0011	0.0014	0.0016	0.0018	0.0022
4	0.4633	0.4212	0.0005	0.0009	0.0012	0.0014	0.0016	0.0018
5	0.4635	0.4223	0.0008	0.0012	0.0016	0.0017	0.0018	0.0021
6	0.4631	0.4218	0.0009	0.0012	0.0013	0.0014	0.0015	0.0018
7	0.4625	0.4211	0.0011	0.0012	0.0013	0.0015	0.0018	0.0021
8	0.4636	0.4215	0.0011	0.0013	0.0014	0.0015	0.0016	0.0019
9	0.4631	0.4216	0.0008	0.0013	0.0012	0.0013	0.0013	0.0015
10	0.4627	0.4211	0.0011	0.0013	0.0012	0.0014	0.0015	0.0016
11	0.4634	0.4213	0.0008	0.0011	0.0014	0.0016	0.0017	0.0019
12	0.4631	0.4215	0.0009	0.0013	0.0012	0.0013	0.0012	0.0018
13	0.4624	0.4214	0.0008	0.0008	0.0011	0.0014	0.0016	0.0017
14	0.4625	0.4208	0.0007	0.0011	0.0012	0.0013	0.0014	0.0016
15	0.4622	0.4215	0.0012	0.0012	0.0013	0.0015	0.0016	0.0018
16	0.4633	0.4212	0.0012	0.0013	0.0014	0.0016	0.0016	0.0017
17	0.4618	0.4216	0.0011	0.0011	0.0014	0.0016	0.0017	0.0019
18	0.4634	0.4217	0.0008	0.0009	0.0011	0.0013	0.0013	0.0018
19	0.4635	0.4212	0.0009	0.0009	0.0013	0.0013	0.0014	0.0019
20	0.4633	0.4215	0.0008	0.0008	0.0012	0.0014	0.0015	0.0018
Average	0.4629	0.4214	0.0009	0.0011	0.0013	0.0015	0.0016	0.0018
Median	0.4631	0.4214	0.0008	0.0011	0.0013	0.0014	0.0016	0.0018
St, Dev.	0.0006	0.0003	0.0002	0.0002	0.0001	0.0001	0.0002	0.0002
Max	0.4636	0.4223	0.0012	0.0013	0.0016	0.0017	0.0018	0.0022
Min	0.4618	0.4208	0.0005	0.0008	0.0011	0.0013	0.0012	0.0015



Operating Condition: 85 /60mA

No.	x	y	Chromaticity Shift u'v'					
	0h(Initial)	1000h	2000h	3000h	4000h	5000h	6000h	
1	0.4621	0.4225	0.0011	0.0014	0.0016	0.0021	0.0024	0.0026
2	0.4633	0.4233	0.0013	0.0016	0.0023	0.0025	0.0026	0.0027
3	0.4631	0.4215	0.0009	0.0013	0.0017	0.0021	0.0023	0.0028
4	0.4628	0.4233	0.0012	0.0013	0.0016	0.0018	0.0021	0.0026
5	0.4615	0.4218	0.0014	0.0017	0.0018	0.0023	0.0025	0.0027
6	0.4627	0.4225	0.0011	0.0012	0.0015	0.0021	0.0024	0.0031
7	0.4631	0.4216	0.0012	0.0015	0.0021	0.0026	0.0027	0.0031
8	0.4617	0.4227	0.0012	0.0016	0.0019	0.0022	0.0025	0.0028
9	0.4611	0.4226	0.0013	0.0018	0.0024	0.0025	0.0028	0.0031
10	0.4632	0.4218	0.0011	0.0013	0.0015	0.0016	0.0019	0.0023
11	0.4621	0.4215	0.0011	0.0012	0.0023	0.0024	0.0024	0.0026
12	0.4625	0.4233	0.0014	0.0014	0.0022	0.0024	0.0023	0.0026
13	0.4632	0.4217	0.0012	0.0013	0.0021	0.0025	0.0026	0.0028
14	0.4622	0.4218	0.0013	0.0016	0.0018	0.0024	0.0025	0.0027
15	0.4628	0.4216	0.0012	0.0016	0.0021	0.0023	0.0025	0.0026
16	0.4638	0.4215	0.0013	0.0015	0.0018	0.0021	0.0023	0.0025
17	0.4637	0.4221	0.0014	0.0016	0.0022	0.0024	0.0025	0.0029
18	0.4636	0.4224	0.0013	0.0016	0.0021	0.0025	0.0026	0.0029
19	0.4633	0.4218	0.0014	0.0016	0.0018	0.0022	0.0024	0.0026
20	0.4631	0.4225	0.0011	0.0012	0.0015	0.0016	0.0017	0.0024
Average	0.4627	0.4222	0.0012	0.0015	0.0019	0.0022	0.0024	0.0027
Median	0.4630	0.4220	0.0012	0.0015	0.0019	0.0023	0.0025	0.0027
St. Dev.	0.0008	0.0006	0.0001	0.0002	0.0003	0.0003	0.0003	0.0002
Max	0.4638	0.4233	0.0014	0.0018	0.0024	0.0026	0.0028	0.0031
Min	0.4611	0.4215	0.0009	0.0012	0.0015	0.0016	0.0017	0.0023



Operating Condition: 105 /60mA

No.	x	y	Chromaticity Shift u'v'					
	0h(Initial)	1000h	2000h	3000h	4000h	5000h	6000h	
1	0.3024	0.3315	0.0011	0.0015	0.0019	0.0024	0.0031	0.0034
2	0.3013	0.3323	0.0012	0.0019	0.0024	0.0027	0.0031	0.0033
3	0.3022	0.3311	0.0014	0.0017	0.0019	0.0024	0.0033	0.0035
4	0.3014	0.3312	0.0013	0.0015	0.0018	0.0028	0.0031	0.0035
5	0.3024	0.3313	0.0013	0.0015	0.0021	0.0025	0.0031	0.0036
6	0.3017	0.3314	0.0012	0.0016	0.0019	0.0023	0.0034	0.0036
7	0.3015	0.3312	0.0012	0.0016	0.0022	0.0025	0.0036	0.0036
8	0.3022	0.3306	0.0014	0.0018	0.0021	0.0025	0.0033	0.0035
9	0.3023	0.3312	0.0013	0.0018	0.0021	0.0024	0.0035	0.0036
10	0.3014	0.3305	0.0011	0.0016	0.0024	0.0026	0.0029	0.0032
11	0.3022	0.3311	0.0013	0.0017	0.0019	0.0023	0.0032	0.0037
12	0.3014	0.3306	0.0015	0.0016	0.0018	0.0025	0.0029	0.0037
13	0.3013	0.3305	0.0013	0.0015	0.0019	0.0024	0.0031	0.0036
14	0.3014	0.3304	0.0013	0.0016	0.0018	0.0025	0.0030	0.0031
15	0.3021	0.3304	0.0012	0.0015	0.0019	0.0024	0.0029	0.0036
16	0.3022	0.3306	0.0013	0.0015	0.0019	0.0025	0.0032	0.0032
17	0.3013	0.3303	0.0012	0.0017	0.0018	0.0024	0.0033	0.0035
18	0.3015	0.3314	0.0014	0.0016	0.0018	0.0025	0.0032	0.0033
19	0.3012	0.3311	0.0012	0.0021	0.0023	0.0026	0.0029	0.0037
20	0.3012	0.3312	0.0011	0.0018	0.0021	0.0024	0.0026	0.0035
Average	0.3017	0.3310	0.0013	0.0017	0.0020	0.0025	0.0031	0.0035
Median	0.3015	0.3311	0.0013	0.0016	0.0019	0.0025	0.0031	0.0035
St, Dev.	0.0005	0.0005	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002
Max	0.3024	0.3323	0.0015	0.0021	0.0024	0.0028	0.0036	0.0037
Min	0.3012	0.3303	0.0011	0.0015	0.0018	0.0023	0.0026	0.0031



ANNEX A:

Photo-documentation



Photo 1 General Appearance of the EUT

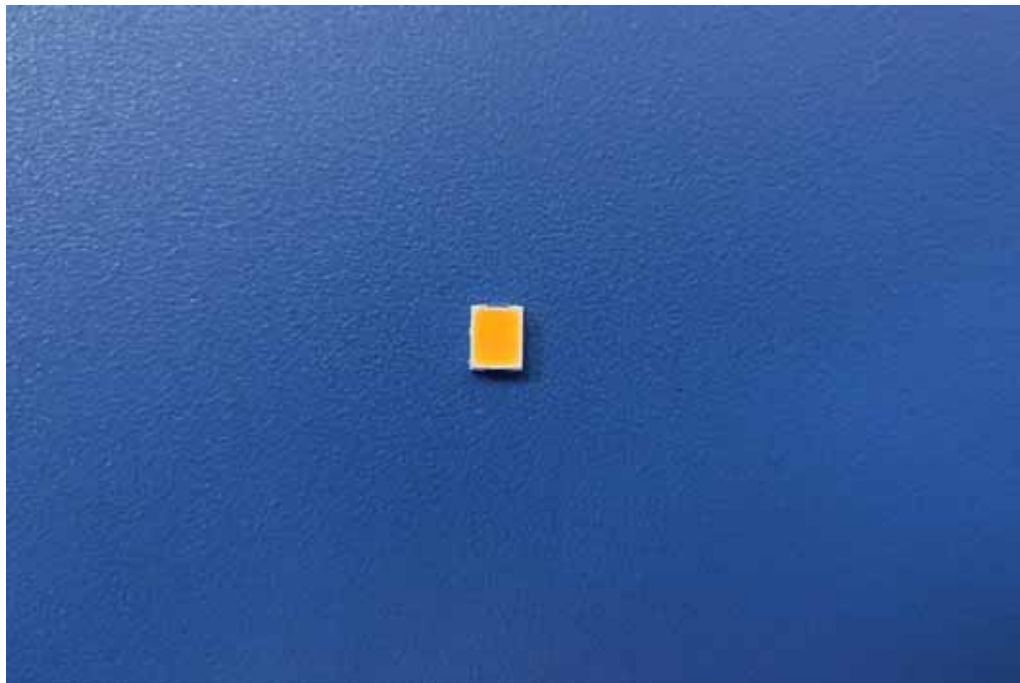


Photo 2 General Appearance of the EUT

