SHENZHEN GUANGMAI ELECTRONICS CO.,LTD.

TEST REPORT

Prepared For:	SHENZHEN GUANGMAI ELECTRONICS CO.,LTD. 5th Floor,B Building,Jingang Tech park,Fuyong,Baoan District,Shenzhen
Product Name:	LED3030
Model Number:	3030
Prepared By:	Shenzhen BST Technology Co., Ltd. Building No.23-24, Zhiheng industrial park, Guankouer Road, Nantou, Nanshan District, Shenzhen, Guangdong, China.
Test Date:	Jan.16, 2018 –Jul.15, 2019
Date of Report:	Jul.15, 2019
Report No.:	BST190712658402YSR

TEST REPORT

LUMEN MAINTENANCE TESTING ACCORDING TO THE IESNA LM-80-15 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 ……	:	SHENZHEN GUANGMAI ELECTRONICS CO.,LTD.
Address ……	:	5th Floor,B Building,Jingang Tech park,Fuyong,Baoan District,Shenzhen
Standard	:	IES LM-80-15
Non-standard test method ……	:	N.A.
Type of test object ……	:	LED3030
Trademark ……	:	GMKJ 光脉科技
Model/type reference ……	:	3030
Rating ……	:	5.8-6.0V ⎓ 150mA ,1W
Manufacturer ……	:	SHENZHEN GUANGMAI ELECTRONICS CO.,LTD.
Address ……..	:	5th Floor,B Building,Jingang Tech park,Fuyong,Baoan District,Shenzhen

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 : Tracy Yang
Engineer

Reviewer : Owen
Supervisor

Approved & Authorized Signer :
Manager

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	Ts=55℃ T_A=53.9℃ R.H.<65% I_F=150mA	Ts=85℃ T_A=84.6℃ R.H.<65% I_F=150mA	Ts=104.9℃ T_A=103.4℃ R.H.<65% I_F=150mA
Duration(hour)	10000	10000	10000
Interval(hour)	1000,2000,3000,4000, 5000,6000,7000,8000, 9000,10000	1000,2000,3000,4000, 5000,6000,7000,8000, 9000,10000	1000,2000,3000,4000, 5000,6000,7000,8000, 9000,10000
Sample number	20	20	20
Average Lumen Maintenance at 10000 hour	96.11%	95.52%	94.83%
Average Chromaticity Shift △u'v' at 10000 hour	0.0022	0.0025	0.0029
Failure	None	None	None
α	4.238E-06	4.394E-06	4.472E-06
β	1.002	0.997	0.991
Calculated L70(10K) (hours)	85,000	80,000	78,000
Reported TM-21 L70 Lifetime:	>60,000	>60,000	>60,000

Equipments Used for Testing:

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

Test Data:
Operating Condition: 55℃/150mA

Sample No.	VF(V)	LF(lm)	Lumen Maintenance (%)					
	0hr(Initial)		1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	5.91	157.47	100.07	99.28	99.11	98.61	98.18	97.83
2	5.84	156.56	100.17	99.41	98.85	98.62	98.10	97.83
3	5.99	157.98	100.09	99.33	98.83	98.49	98.21	97.79
4	5.83	155.79	99.88	99.63	99.05	98.40	98.20	97.86
5	5.80	157.34	99.92	99.56	99.14	98.43	98.20	97.79
6	5.96	157.44	100.04	99.64	99.09	98.65	98.19	97.83
7	5.83	156.24	100.02	99.36	98.78	98.28	98.21	97.87
8	5.95	156.27	100.13	99.44	99.04	98.39	98.19	97.76
9	5.83	156.48	100.03	99.26	99.02	98.39	98.12	97.74
10	5.88	157.06	99.92	99.63	98.79	98.49	98.13	97.77
11	6.01	154.24	100.23	99.33	98.74	98.63	98.12	97.87
12	5.85	153.99	99.97	99.26	98.81	98.25	98.15	97.79
13	6.00	154.55	100.29	99.29	98.86	98.53	98.17	97.80
14	5.82	159.73	99.92	99.58	98.83	98.26	98.18	97.87
15	5.91	158.32	100.01	99.51	98.77	98.27	98.23	97.76
16	5.88	155.45	99.91	99.53	99.08	98.40	98.15	97.88
17	5.92	155.77	100.17	99.25	98.82	98.31	98.16	97.83
18	5.89	155.92	100.22	99.57	98.74	98.21	98.13	97.76
19	5.86	156.56	100.04	99.33	98.89	98.49	98.21	97.86
20	5.94	159.39	100.26	99.29	99.14	98.57	98.17	97.88
Avg.	**5.90**	**156.63**	**100.06**	**99.42**	**98.92**	**98.43**	**98.17**	**97.82**
Median	5.89	156.52	100.04	99.39	98.86	98.42	98.18	97.83
δ	0.062	1.494	0.123	0.139	0.141	0.137	0.035	0.045
Min.	5.80	153.99	99.88	99.25	98.74	98.21	98.10	97.74
Max.	6.01	159.73	100.29	99.64	99.14	98.65	98.23	97.88

Sample No.	Lumen Maintenance (%)			
	7000hrs	8000hrs	9000hrs	10000hrs
1	97.09	96.72	96.53	96.33
2	97.12	96.75	96.61	96.32
3	97.12	96.77	96.58	96.01
4	97.08	96.66	96.59	96.48
5	97.04	96.69	96.52	96.06
6	97.05	96.67	96.57	96.13
7	97.08	96.77	96.58	96.08
8	97.15	96.73	96.58	95.97
9	97.43	97.14	96.75	96.40
10	97.08	96.69	96.50	96.21
11	97.16	96.64	96.54	95.92
12	97.15	96.66	96.59	96.03
13	97.09	96.63	96.58	96.11
14	97.07	96.78	96.61	96.14
15	97.10	96.62	96.61	96.06
16	97.06	96.76	96.57	95.86
17	97.11	96.69	96.55	96.11
18	97.16	96.75	96.54	96.11
19	97.07	96.64	96.53	95.80
20	97.07	96.66	96.50	96.01
Avg.	**97.11**	**96.72**	**96.57**	**96.11**
Median	97.09	96.69	96.58	96.10
δ	0.081	0.108	0.053	0.169
Min.	97.04	96.62	96.50	95.80
Max.	97.43	97.14	96.75	96.48

TM-21 PROJECTION

Test duration:10000h

Failure:0

α: 4.238E-06

β:1.002

Calculated L_{70}:85,000

Reported L_{70}: >60,000

Operating Condition: 55℃/150mA

No.	CCT(K)	Chromaticity Shift △u'v'					
	0h (Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	6116	0.0002	0.0004	0.0008	0.0010	0.0012	0.0014
2	6153	0.0002	0.0003	0.0005	0.0007	0.0009	0.0011
3	6092	0.0002	0.0005	0.0007	0.0009	0.0011	0.0012
4	6182	0.0005	0.0006	0.0008	0.0011	0.0014	0.0016
5	6158	0.0003	0.0005	0.0007	0.0009	0.0011	0.0013
6	6135	0.0002	0.0004	0.0005	0.0007	0.0009	0.0011
7	6104	0.0002	0.0004	0.0005	0.0009	0.0012	0.0015
8	6148	0.0002	0.0005	0.0006	0.0008	0.0010	0.0013
9	6100	0.0003	0.0005	0.0007	0.0008	0.0010	0.0014
10	6151	0.0004	0.0005	0.0007	0.0009	0.0011	0.0015
11	6134	0.0002	0.0004	0.0006	0.0008	0.0013	0.0016
12	6117	0.0003	0.0004	0.0006	0.0008	0.0011	0.0014
13	6129	0.0004	0.0004	0.0006	0.0009	0.0010	0.0013
14	6098	0.0003	0.0006	0.0008	0.0011	0.0012	0.0014
15	6136	0.0005	0.0007	0.0008	0.0010	0.0012	0.0013
16	6129	0.0003	0.0005	0.0007	0.0009	0.0010	0.0011
17	6116	0.0005	0.0006	0.0008	0.0010	0.0011	0.0013
18	6104	0.0004	0.0005	0.0006	0.0008	0.0010	0.0012
19	6153	0.0004	0.0006	0.0008	0.0012	0.0014	0.0016
20	6104	0.0002	0.0005	0.0007	0.0010	0.0015	0.0017
Avg.	**6128**	**0.0003**	**0.0005**	**0.0007**	**0.0009**	**0.0011**	**0.0014**
Median	6129	0.0003	0.0005	0.0007	0.0009	0.0011	0.0014
δ	23.73	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002
Min.	6092	0.0002	0.0003	0.0005	0.0007	0.0009	0.0011
Max.	6182	0.0005	0.0007	0.0008	0.0012	0.0015	0.0017

No.	Chromaticity Shift △u'v'			
	7000hrs	8000hrs	9000hrs	10000hrs
1	0.0017	0.0019	0.0021	0.0023
2	0.0015	0.0017	0.0019	0.0021
3	0.0015	0.0017	0.0019	0.0021
4	0.0019	0.0021	0.0023	0.0025
5	0.0016	0.0018	0.0020	0.0022
6	0.0014	0.0016	0.0018	0.0020
7	0.0016	0.0018	0.0020	0.0022
8	0.0016	0.0018	0.0020	0.0022
9	0.0016	0.0018	0.0020	0.0022
10	0.0019	0.0021	0.0023	0.0025
11	0.0019	0.0021	0.0023	0.0025
12	0.0017	0.0019	0.0021	0.0023
13	0.0016	0.0018	0.0020	0.0022
14	0.0014	0.0016	0.0018	0.0020
15	0.0015	0.0017	0.0019	0.0021
16	0.0014	0.0016	0.0018	0.0020
17	0.0016	0.0018	0.0020	0.0022
18	0.0016	0.0018	0.0020	0.0022
19	0.0019	0.0021	0.0023	0.0025
20	0.0018	0.0020	0.0022	0.0024
Avg.	**0.0016**	**0.0018**	**0.0020**	**0.0022**
Median	0.0016	0.0018	0.0020	0.0022
δ	0.0002	0.0002	0.0002	0.0002
Min.	0.0014	0.0016	0.0018	0.0020
Max.	0.0019	0.0021	0.0023	0.0025

Operating Condition: 85℃/150mA

Sample No.	VF(V)	LF(lm)	Lumen Maintenance (%)					
	0hr(Initial)		1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	5.96	156.45	99.71	98.85	98.33	97.86	97.49	97.16
2	5.87	156.80	99.89	99.02	98.59	97.78	97.47	97.17
3	5.87	157.75	99.75	98.95	98.35	97.65	97.46	97.17
4	5.88	159.72	99.49	99.07	98.58	97.74	97.42	97.31
5	5.89	155.49	99.63	98.74	98.45	97.60	97.57	97.13
6	5.91	158.01	99.55	98.80	98.60	97.68	97.49	97.33
7	5.83	158.37	99.49	98.92	98.39	97.75	97.53	97.35
8	5.91	157.72	99.86	99.02	98.49	97.84	97.50	97.13
9	5.93	157.83	99.67	99.02	98.34	97.71	97.55	97.17
10	5.94	159.74	99.86	99.14	98.25	97.80	97.44	97.27
11	5.90	155.45	99.50	98.85	98.37	97.96	97.43	97.28
12	5.91	157.30	99.56	98.81	98.31	97.95	97.47	97.09
13	5.86	158.80	99.84	98.79	98.26	97.97	97.56	97.26
14	5.83	157.75	99.82	99.00	98.54	97.66	97.48	97.19
15	5.94	156.80	99.84	99.04	98.24	97.62	97.42	97.25
16	5.97	158.58	99.87	99.11	98.39	97.74	97.43	97.17
17	5.99	160.01	99.66	98.72	98.26	97.86	97.49	97.30
18	5.90	158.37	99.83	98.96	98.30	97.87	97.48	97.28
19	5.96	158.58	99.84	99.17	98.23	97.89	97.45	97.21
20	5.99	155.83	99.62	99.05	98.49	97.73	97.57	97.16
Avg.	**5.91**	**157.77**	**99.71**	**98.95**	**98.39**	**97.78**	**97.49**	**97.22**
Median	5.91	157.79	99.73	98.98	98.36	97.77	97.48	97.20
δ	0.047	1.305	0.139	0.131	0.120	0.111	0.048	0.073
Min.	5.83	155.45	99.49	98.72	98.23	97.60	97.42	97.09
Max.	5.99	160.01	99.89	99.17	98.60	97.97	97.57	97.35

Sample No.	Lumen Maintenance (%)			
	7000hrs	8000hrs	9000hrs	10000hrs
1	96.55	96.24	95.68	95.51
2	96.55	96.20	95.67	95.53
3	96.59	96.15	95.65	95.62
4	96.62	96.15	95.76	95.57
5	96.62	96.13	95.65	95.51
6	96.55	96.16	95.68	95.47
7	96.63	96.16	95.69	95.60
8	96.60	96.24	95.73	95.49
9	96.61	96.20	95.71	95.34
10	96.58	96.19	95.74	95.53
11	96.67	96.19	95.65	95.58
12	96.56	96.21	95.71	95.53
13	96.65	96.21	95.66	95.53
14	96.71	96.14	95.76	95.44
15	96.64	96.17	95.75	95.49
16	96.56	96.18	95.75	95.47
17	96.73	96.21	95.69	95.54
18	96.66	96.18	95.67	95.45
19	96.63	96.26	95.69	95.59
20	96.63	96.21	95.78	95.64
Avg.	**96.62**	**96.19**	**95.70**	**95.52**
Median	96.62	96.19	95.69	95.53
δ	0.050	0.034	0.041	0.068
Min.	96.55	96.13	95.65	95.34
Max.	96.73	96.26	95.78	95.64

TM-21 PROJECTION

Test duration:10000h

Failure:0

α: 4.394E-06

β:0.997

Calculated L_{70}:80,000

Reported L_{70}: >60,000

Operating Condition: 85℃/150mA

No.	CCT(K)	Chromaticity Shift △u'v'					
	0h (Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	6120	0.0004	0.0007	0.0011	0.0013	0.0015	0.0018
2	6159	0.0004	0.0008	0.0010	0.0012	0.0014	0.0017
3	6144	0.0002	0.0004	0.0006	0.0008	0.0012	0.0015
4	6135	0.0003	0.0005	0.0009	0.0011	0.0014	0.0016
5	6099	0.0005	0.0008	0.0010	0.0012	0.0016	0.0018
6	6066	0.0002	0.0004	0.0007	0.0008	0.0014	0.0016
7	6092	0.0003	0.0005	0.0007	0.0008	0.0015	0.0018
8	6096	0.0005	0.0008	0.0009	0.0011	0.0018	0.0020
9	6065	0.0005	0.0008	0.0010	0.0013	0.0017	0.0020
10	6103	0.0004	0.0008	0.0010	0.0014	0.0018	0.0020
11	6116	0.0003	0.0007	0.0009	0.0011	0.0015	0.0016
12	6044	0.0004	0.0007	0.0009	0.0014	0.0017	0.0018
13	6141	0.0003	0.0007	0.0009	0.0013	0.0016	0.0019
14	6120	0.0004	0.0007	0.0009	0.0011	0.0013	0.0015
15	6119	0.0005	0.0006	0.0008	0.0011	0.0015	0.0018
16	6124	0.0004	0.0006	0.0010	0.0015	0.0016	0.0020
17	6063	0.0004	0.0005	0.0007	0.0009	0.0011	0.0014
18	6087	0.0004	0.0006	0.0008	0.0009	0.0011	0.0013
19	6132	0.0003	0.0007	0.0009	0.0011	0.0015	0.0019
20	6134	0.0003	0.0005	0.0010	0.0013	0.0018	0.0020
Avg.	**6108**	**0.0004**	**0.0006**	**0.0009**	**0.0011**	**0.0015**	**0.0018**
Median	6118	0.0004	0.0007	0.0009	0.0011	0.0015	0.0018
δ	30.31	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002
Min.	6044	0.0002	0.0004	0.0006	0.0008	0.0011	0.0013
Max.	6159	0.0005	0.0008	0.0011	0.0015	0.0018	0.0020

No.	Chromaticity Shift △u'v'			
	10000hrs	11000hrs	12000hrs	13000hrs
1	0.0020	0.0021	0.0023	0.0026
2	0.0019	0.0022	0.0023	0.0025
3	0.0016	0.0018	0.0020	0.0021
4	0.0018	0.0020	0.0021	0.0023
5	0.0021	0.0022	0.0024	0.0025
6	0.0018	0.0020	0.0021	0.0023
7	0.0019	0.0021	0.0022	0.0024
8	0.0021	0.0024	0.0026	0.0027
9	0.0021	0.0022	0.0025	0.0027
10	0.0022	0.0025	0.0027	0.0030
11	0.0019	0.0021	0.0023	0.0025
12	0.0019	0.0021	0.0023	0.0025
13	0.0021	0.0022	0.0024	0.0026
14	0.0017	0.0019	0.0021	0.0023
15	0.0020	0.0021	0.0023	0.0025
16	0.0022	0.0023	0.0025	0.0026
17	0.0016	0.0017	0.0019	0.0022
18	0.0015	0.0017	0.0020	0.0022
19	0.0022	0.0024	0.0025	0.0026
20	0.0021	0.0023	0.0024	0.0026
Avg.	**0.0019**	**0.0021**	**0.0023**	**0.0025**
Median	0.0020	0.0021	0.0023	0.0025
δ	0.0002	0.0002	0.0002	0.0002
Min.	0.0015	0.0017	0.0019	0.0021
Max.	0.0022	0.0025	0.0027	0.0030

Operating Condition: 105℃/150mA

Sample No.	VF(V)	LF(lm)	Lumen Maintenance (%)					
	0hr(Initial)		1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	5.96	153.09	99.19	98.63	97.59	97.13	96.80	96.62
2	5.87	159.44	98.81	98.56	97.56	97.09	96.83	96.58
3	5.98	158.76	98.88	98.19	97.80	97.09	96.86	96.63
4	5.88	150.73	99.19	98.55	97.64	97.25	96.80	96.60
5	5.89	158.50	98.80	98.36	97.66	97.25	96.77	96.51
6	5.91	159.02	98.97	98.43	97.87	97.42	96.93	96.52
7	5.83	159.38	98.83	98.39	97.65	97.03	96.86	96.47
8	5.91	154.73	99.06	98.24	97.63	97.37	96.85	96.51
9	5.93	158.84	98.88	98.29	97.69	97.09	96.79	96.66
10	5.94	152.75	99.12	98.25	97.84	97.04	96.87	96.61
11	5.90	151.46	98.85	98.32	97.58	97.18	96.93	96.68
12	5.91	158.31	99.01	98.52	97.63	97.09	96.91	96.65
13	5.86	157.81	99.15	98.50	97.74	97.27	96.77	96.48
14	5.83	158.76	99.19	98.28	97.84	97.33	96.80	96.52
15	5.94	157.81	98.96	98.25	97.64	97.16	96.85	96.60
16	5.97	159.59	99.11	98.28	97.77	97.12	96.93	96.55
17	6.00	156.02	98.98	98.58	97.79	97.28	96.88	96.57
18	5.90	158.38	98.89	98.36	97.56	97.25	96.90	96.59
19	5.96	159.59	98.91	98.20	97.68	97.12	96.85	96.48
20	5.99	158.84	99.04	98.24	97.82	97.16	96.87	96.63
Avg.	**5.92**	**157.09**	**98.99**	**98.37**	**97.70**	**97.19**	**96.85**	**96.57**
Median	5.91	158.44	98.98	98.34	97.67	97.16	96.86	96.59
δ	0.049	2.816	0.130	0.137	0.099	0.108	0.051	0.063
Min.	5.83	150.73	98.80	98.19	97.56	97.03	96.77	96.47
Max.	6.00	159.59	99.19	98.63	97.87	97.42	96.93	96.68

Sample No.	Lumen Maintenance (%)			
	7000hrs	8000hrs	9000hrs	10000hrs
1	95.98	95.68	95.03	94.80
2	96.09	95.66	95.07	94.93
3	96.09	95.67	95.10	95.01
4	96.00	95.65	95.01	94.56
5	96.01	95.66	95.09	94.92
6	95.99	95.70	95.13	94.93
7	96.02	95.65	95.13	94.86
8	95.98	95.61	95.09	94.60
9	95.99	95.69	95.13	94.91
10	96.03	95.65	95.02	94.80
11	95.98	95.70	95.07	94.97
12	96.04	95.64	95.13	94.81
13	96.07	95.62	94.98	94.72
14	96.08	95.70	95.11	94.96
15	96.10	95.68	95.13	94.95
16	96.08	95.63	95.03	94.84
17	95.98	95.71	95.02	94.81
18	96.02	95.67	94.94	94.50
19	96.05	95.62	95.01	94.76
20	96.03	95.65	95.02	94.86
Avg.	**96.03**	**95.66**	**95.06**	**94.83**
Median	96.03	95.66	95.07	94.85
δ	0.041	0.029	0.056	0.137
Min.	95.98	95.61	94.94	94.50
Max.	96.10	95.71	95.13	95.01

TM-21 PROJECTION

Test duration:10000h

Failure:0

α:4.472E-06

β:0.991

Calculated L_{70}:78,000

Reported L_{70}: >60,000

Operating Condition: 105℃/150mA

No.	CCT(K)	Chromaticity Shift △u'v'					
	0h (Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	6117	0.0004	0.0009	0.0012	0.0018	0.0020	0.0022
2	6162	0.0005	0.0008	0.0014	0.0017	0.0021	0.0024
3	6138	0.0004	0.0008	0.0010	0.0015	0.0016	0.0020
4	6141	0.0004	0.0009	0.0013	0.0017	0.0018	0.0022
5	6107	0.0006	0.0009	0.0011	0.0015	0.0018	0.0020
6	6074	0.0004	0.0008	0.0012	0.0016	0.0018	0.0020
7	6088	0.0004	0.0009	0.0013	0.0018	0.0018	0.0020
8	6100	0.0006	0.0009	0.0013	0.0017	0.0019	0.0021
9	6065	0.0006	0.0007	0.0010	0.0012	0.0016	0.0018
10	6103	0.0005	0.0010	0.0012	0.0014	0.0016	0.0018
11	6116	0.0004	0.0010	0.0013	0.0017	0.0019	0.0021
12	6070	0.0003	0.0014	0.0018	0.0017	0.0019	0.0019
13	6141	0.0004	0.0007	0.0011	0.0013	0.0017	0.0020
14	6120	0.0005	0.0009	0.0014	0.0018	0.0018	0.0021
15	6119	0.0006	0.0011	0.0014	0.0016	0.0018	0.0020
16	6104	0.0004	0.0007	0.0011	0.0017	0.0018	0.0020
17	6063	0.0005	0.0008	0.0011	0.0014	0.0018	0.0022
18	6087	0.0004	0.0008	0.0012	0.0016	0.0018	0.0021
19	6132	0.0004	0.0011	0.0015	0.0017	0.0019	0.0021
20	6134	0.0004	0.0009	0.0013	0.0015	0.0018	0.0020
Avg.	**6109**	**0.0005**	**0.0009**	**0.0013**	**0.0016**	**0.0018**	**0.0021**
Median	6112	0.0004	0.0009	0.0013	0.0017	0.0018	0.0020
δ	27.44	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001
Min.	6063	0.0003	0.0007	0.0010	0.0012	0.0016	0.0018
Max.	6162	0.0006	0.0014	0.0018	0.0018	0.0021	0.0024

No.	Chromaticity Shift △u'v'			
	7000hrs	8000hrs	9000hrs	10000hrs
1	0.0023	0.0025	0.0029	0.0032
2	0.0025	0.0026	0.0028	0.0030
3	0.0021	0.0023	0.0025	0.0027
4	0.0022	0.0023	0.0028	0.0030
5	0.0022	0.0025	0.0027	0.0029
6	0.0024	0.0025	0.0028	0.0030
7	0.0022	0.0024	0.0026	0.0028
8	0.0023	0.0024	0.0026	0.0027
9	0.0020	0.0022	0.0024	0.0028
10	0.0020	0.0023	0.0025	0.0027
11	0.0023	0.0027	0.0029	0.0030
12	0.0024	0.0026	0.0028	0.0030
13	0.0021	0.0023	0.0025	0.0027
14	0.0023	0.0026	0.0028	0.0029
15	0.0024	0.0025	0.0027	0.0028
16	0.0022	0.0023	0.0024	0.0026
17	0.0025	0.0026	0.0028	0.0030
18	0.0025	0.0027	0.0029	0.0031
19	0.0023	0.0026	0.0028	0.0030
20	0.0022	0.0024	0.0026	0.0028
Avg.	**0.0023**	**0.0025**	**0.0027**	**0.0029**
Median	0.0023	0.0025	0.0028	0.0029
δ	0.0001	0.0001	0.0002	0.0002
Min.	0.0020	0.0022	0.0024	0.0026
Max.	0.0025	0.0027	0.0029	0.0032

In situ Temperature and Driver Current Measurements of Final Product

1.1 Reference Standard

ANSI/UL 8750-2009: Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products
ANSI/UL 153-2002: Standard for Safety of Portable Electric Luminaires
ANSI/UL 1598-2008: Standard for Safety of Luminaires

1.2 Test Equipment

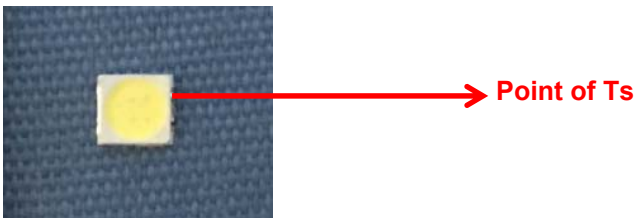
Device	Manufacture	Model No	Serial No	Cal Due
AC Power Source	ALL POWER	APW-110N	992257	2019-08-28
Digital Power Meter	YOKOGAWA	WT310	C2QM02030V	2019-08-30
Hybrid Recorder (60 channel)	AGILENT	34970A	MY41009304	2019-09-13

Statement of Traceability: Shenzhen BST Technology Co., Ltd. that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

1.3 - Temperature Measurement Data The sample was operated until constant temperatures were obtained. temperature was considered constant if the sample was operating for at least three hours and upon three A successive readings - taken at 15 minute intervals - were within one degree and were not rising. Thermocouples were attached at locations described in the results by means of a cement made of water glass and Fuller's earth, solder, or epoxy.

Ambient Temperature,℃: 25±5℃
Relative Humidity, % : 56 %
Supply voltage: 120 V 60 Hz Type of thermocouples: K

Temperature measurement point of [Ts]:



ANNEX:

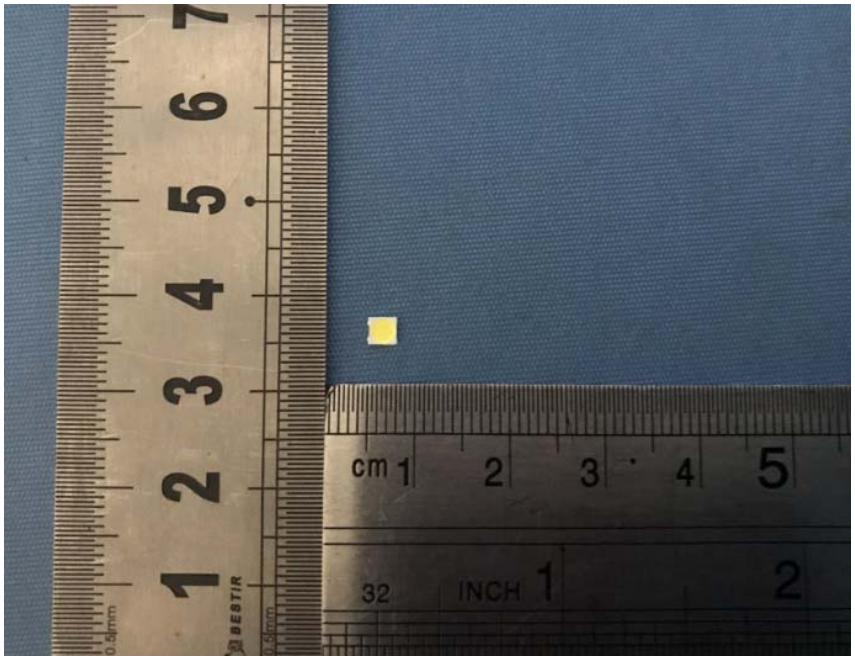


Photo-documentation