

IESNA LM-80-2015

For

Bridgelux**(Brand Name: )**

46430 Fremont Boulevard Fremont, CA 94538 USA

Model name(s): BXEN-27E-13H-99N

Remark: BXEN-(A)(B)-13H-9(C)
(A):CCT Variation, can be 10-65,for
1000K~6500K;
(B):CRI Variation, can be C for 70,E for 80,G for
90,H for >95;
(C):Customer code, can be 0-ZZ

Test Date: 2017-05-06 to 2018-07-17

Test & Report By:

Garman Mo

Engineer: Garman Mo

Date: Aug.03, 2018

Review By:

John Li

Manager: John Li

Note: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

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 Standard-Tech Co.,Ltd.

Laboratory: Standard-Tech Co., Ltd Testing Center**NVLAP CODE: 201011-0****Report Format: QR4606-A2**

Address: Standard-Tech Building, No.6 Guanhong Road,Guangzhou Science City, Guangzhou 510663, China

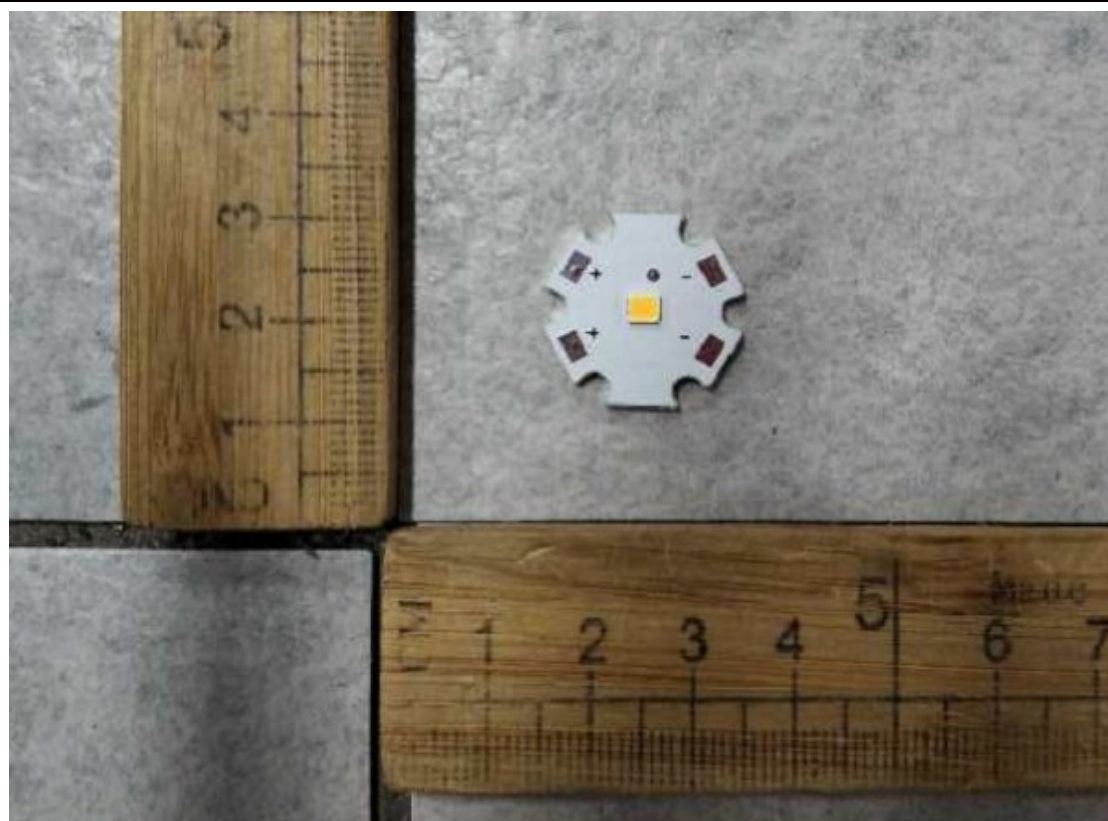
Tel: 8620-3229 0320

Fax: 8620-32290422

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1.1 Product Information:	
Organization Name	KAISTAR LIGHTING(XIAMEN) CO.,LTD
Brand Name	N/A
Model Number	BXEN-27E-13H-99N
SKU (if available)	N/A
Rated Voltage	9V
Rated Current:	100 mA
Rated Power	1W
Declared CCT	2700K
Sample Number	STD180743NB-A1-A20, A21-A40

Photo



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1.2 Test Specifications:	
Date of Receipt	May.05, 2017
Date of Test	May.06, 2017 to Jul.17, 2018
1. Standards used: IES LM-80-08 Approved Method for Measuring Lumen Maintenance of LED Light Sources.	
2. LED packages are driven at constant current for both life test and photometric test.	
3. Operating Cycle: The samples were driven continuously with a constant direct.	
4. Ambient conditions, airflow, relative humidity LED's are operated on controlled thermal plates in an environment that complies with the requirements of IES LM80-2015. Case temperature (Ts): controlled within -2°C, Surrounding air temp: controlled to within -5°C of Ts ,Humidity: < 65 RH. Airflow shall be minimized.	
5. The input current shall be monitored and regulated to within +/-3% of the rated rms value during life testing. The input current shall be monitored and regulated to within +/-0.5% of the rated rms value during photometric and electrical measurements.	
6. The photometric and electrical measurements were taken in integrated sphere and its system and power meter.	

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1.3 Test Results Summary

Test Number:	BXEN-27E-13H-99N
Number of Units:	20
Actual Case Temperature(TS):	85.2° C
Actual Ambient Temperature(TA):	85.7° C
Humidity	56 %RH
Measurement Current:	100mA
Test Interval and Test Duration:	0h, 1000h, 2000h, 3000h, 4000h, 5000h, 6000h, 7000h , 8000h , 9000h , 10000h
Average. Lumen Maintenance at 10000 hours:	98.38%
Average Chromaticity Shift at 10000 hours ($\Delta u'v'$)	0.0033
Calculated TM-21 L ₇₀ Lifetime:	121000h
Reported TM-21 L ₇₀ Lifetime:	>60000h

Test Number:	BXEN-27E-13H-99N
Number of Units:	20
Actual Case Temperature(TS):	104.9° C
Actual Ambient Temperature(TA):	105.3° C
Humidity	56 %RH
Measurement Current:	100mA
Test Interval and Test Duration:	0h, 1000h, 2000h, 3000h, 4000h, 5000h, 6000h, 7000h , 8000h , 9000h , 10000h
Average. Lumen Maintenance at 10000 hours:	95.28%
Average Chromaticity Shift at 10000 hours ($\Delta u'v'$)	0.0039
Calculated TM-21 L ₇₀ Lifetime:	56000h
Reported TM-21 L ₇₀ Lifetime:	56000h

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2. Test Data

2.1.1 Data Set 1, 85°C, 100mA (Lumen Maintenance)

Sample Number	Vf (V)	Im	Lumen Maintenance (%)					
	0hr		1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
STD180743NB-A1	9.126	95.27	100.54	100.50	100.29	100.11	99.96	99.50
STD180743NB-A2	9.215	96.90	100.45	100.45	100.30	100.22	99.91	99.51
STD180743NB-A3	9.232	95.88	100.54	100.48	100.42	100.36	100.27	99.64
STD180743NB-A4	9.209	98.69	100.74	100.68	100.60	100.14	100.05	99.54
STD180743NB-A5	9.214	98.81	100.74	100.69	100.65	100.38	99.70	99.91
STD180743NB-A6	9.128	96.08	100.64	100.64	100.54	100.04	99.99	99.74
STD180743NB-A7	9.197	98.34	100.45	100.45	100.38	100.21	100.15	99.68
STD180743NB-A8	9.102	97.66	100.53	100.64	100.63	100.36	100.02	99.80
STD180743NB-A9	9.194	97.02	100.60	100.49	100.43	100.42	100.24	99.45
STD180743NB-A10	9.191	96.12	100.73	100.52	100.26	100.25	99.98	99.71
STD180743NB-A11	9.188	96.26	100.62	100.56	100.41	100.37	100.25	99.91
STD180743NB-A12	9.125	95.77	100.72	100.68	100.49	100.18	99.76	99.58
STD180743NB-A13	9.206	95.85	100.74	100.32	100.19	100.10	100.08	99.82
STD180743NB-A14	9.192	98.02	100.66	100.48	100.28	100.00	99.94	99.65
STD180743NB-A15	9.199	96.07	100.87	100.43	100.13	100.05	99.96	99.80
STD180743NB-A16	9.214	94.96	100.82	100.40	100.42	100.22	99.93	99.78
STD180743NB-A17	9.191	96.04	100.66	100.54	100.50	100.25	100.11	100.08
STD180743NB-A18	9.176	96.11	100.46	100.30	100.18	100.23	100.09	100.06
STD180743NB-A19	9.122	99.31	100.54	100.54	100.36	100.10	99.79	99.60
STD180743NB-A20	9.216	98.15	100.69	100.52	100.41	100.19	99.95	99.89
Avg.	9.182	96.87	100.54	100.50	100.29	100.11	99.96	99.50
Min.	9.102	94.96	100.45	100.45	100.30	100.22	99.91	99.51
Max.	9.232	99.31	100.54	100.48	100.42	100.36	100.27	99.64
Med.	9.193	96.19	100.74	100.68	100.60	100.14	100.05	99.54
ST dev	0.0377	1.2590	100.74	100.69	100.65	100.38	99.70	99.91

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Sample Number	Lumen Maintenance (%)			
	7000hrs	8000hrs	9000hrs	10000hrs
STD180743NB-A1	99.28	98.92	98.77	98.25
STD180743NB-A2	99.44	99.25	98.46	98.46
STD180743NB-A3	99.32	98.82	98.55	98.41
STD180743NB-A4	99.38	99.22	98.94	98.13
STD180743NB-A5	99.62	99.21	98.95	98.18
STD180743NB-A6	99.42	99.22	99.00	98.08
STD180743NB-A7	99.53	98.96	98.95	98.63
STD180743NB-A8	99.51	99.18	98.79	98.58
STD180743NB-A9	99.30	99.22	98.89	98.25
STD180743NB-A10	99.42	99.08	98.68	98.51
STD180743NB-A11	99.52	98.97	98.87	98.18
STD180743NB-A12	99.22	99.11	98.41	98.10
STD180743NB-A13	99.43	98.90	98.40	98.49
STD180743NB-A14	99.34	99.21	98.68	98.43
STD180743NB-A15	99.62	98.84	98.58	98.35
STD180743NB-A16	99.56	98.94	98.56	98.55
STD180743NB-A17	99.50	98.84	98.48	98.54
STD180743NB-A18	99.62	99.03	98.76	98.59
STD180743NB-A19	99.27	99.29	98.85	98.52
STD180743NB-A20	99.42	98.92	98.91	98.41
Avg.	99.44	99.06	98.72	98.38
Min.	99.22	98.82	98.40	98.08
Max.	99.62	99.29	99.00	98.63
Med.	99.43	99.06	98.77	98.42
ST dev	0.1196	0.1550	0.1932	0.1741

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2.1.2 Data Set 1, 85°C, 100mA (Chromaticity Shift)

Sample Number	u'	v'	CCT(K)	Chromaticity Shift ($\Delta u'v'$)					
	0hr			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
STD180743NB-A1	0.2591	0.5283	2767	0.0003	0.0007	0.0010	0.0012	0.0016	0.0022
STD180743NB-A2	0.2602	0.5265	2752	0.0001	0.0005	0.0007	0.0009	0.0014	0.0016
STD180743NB-A3	0.2615	0.5284	2717	0.0003	0.0006	0.0007	0.0008	0.0009	0.0014
STD180743NB-A4	0.2624	0.5279	2700	0.0002	0.0006	0.0010	0.0013	0.0014	0.0019
STD180743NB-A5	0.2634	0.5280	2679	0.0003	0.0007	0.0010	0.0011	0.0016	0.0021
STD180743NB-A6	0.2605	0.5267	2745	0.0004	0.0005	0.0008	0.0013	0.0015	0.0019
STD180743NB-A7	0.2600	0.5278	2751	0.0004	0.0005	0.0008	0.0013	0.0017	0.0019
STD180743NB-A8	0.2626	0.5276	2696	0.0002	0.0003	0.0006	0.0010	0.0014	0.0019
STD180743NB-A9	0.2575	0.5277	2804	0.0003	0.0006	0.0009	0.0014	0.0015	0.0020
STD180743NB-A10	0.2602	0.5277	2747	0.0002	0.0005	0.0009	0.0011	0.0014	0.0017
STD180743NB-A11	0.2615	0.5279	2718	0.0003	0.0007	0.0008	0.0009	0.0012	0.0015
STD180743NB-A12	0.2599	0.5262	2759	0.0004	0.0005	0.0008	0.0011	0.0016	0.0020
STD180743NB-A13	0.2615	0.5284	2717	0.0004	0.0008	0.0011	0.0014	0.0018	0.0022
STD180743NB-A14	0.2622	0.5278	2705	0.0003	0.0007	0.0008	0.0010	0.0011	0.0015
STD180743NB-A15	0.2624	0.5272	2703	0.0001	0.0003	0.0005	0.0007	0.0010	0.0015
STD180743NB-A16	0.2602	0.5264	2753	0.0002	0.0005	0.0009	0.0013	0.0017	0.0023
STD180743NB-A17	0.2593	0.5271	2770	0.0002	0.0006	0.0008	0.0013	0.0015	0.0017
STD180743NB-A18	0.2621	0.5271	2710	0.0003	0.0004	0.0008	0.0009	0.0014	0.0017
STD180743NB-A19	0.2573	0.5275	2810	0.0004	0.0007	0.0008	0.0011	0.0012	0.0017
STD180743NB-A20	0.2598	0.5273	2757	0.0003	0.0007	0.0010	0.0013	0.0017	0.0023
Avg.	0.2607	0.5275	2738	0.0003	0.0006	0.0008	0.0011	0.0014	0.0019
Min.	0.2573	0.5262	2679	0.0001	0.0003	0.0005	0.0007	0.0009	0.0014
Max.	0.2634	0.5284	2810	0.0004	0.0008	0.0011	0.0014	0.0018	0.0023
Med.	0.2604	0.5277	2746	0.0003	0.0006	0.0008	0.0011	0.0015	0.0019
ST dev	0.0016	0.0006	34.6381	0.0001	0.0001	0.0001	0.0002	0.0002	0.0003

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Sample Number	Chromaticity Shift ($\Delta u'v'$)			
	7000hrs	8000hrs	9000hrs	10000hrs
STD180743NB-A1	0.0023	0.0025	0.0028	0.0030
STD180743NB-A2	0.0017	0.0020	0.0026	0.0031
STD180743NB-A3	0.0019	0.0020	0.0026	0.0031
STD180743NB-A4	0.0020	0.0026	0.0030	0.0037
STD180743NB-A5	0.0027	0.0028	0.0033	0.0034
STD180743NB-A6	0.0025	0.0028	0.0030	0.0034
STD180743NB-A7	0.0025	0.0029	0.0032	0.0036
STD180743NB-A8	0.0020	0.0026	0.0032	0.0033
STD180743NB-A9	0.0021	0.0025	0.0027	0.0030
STD180743NB-A10	0.0023	0.0028	0.0034	0.0035
STD180743NB-A11	0.0018	0.0021	0.0024	0.0031
STD180743NB-A12	0.0022	0.0025	0.0031	0.0034
STD180743NB-A13	0.0024	0.0030	0.0032	0.0033
STD180743NB-A14	0.0019	0.0023	0.0025	0.0031
STD180743NB-A15	0.0021	0.0024	0.0028	0.0034
STD180743NB-A16	0.0026	0.0028	0.0033	0.0037
STD180743NB-A17	0.0019	0.0023	0.0026	0.0027
STD180743NB-A18	0.0022	0.0023	0.0025	0.0026
STD180743NB-A19	0.0023	0.0025	0.0029	0.0030
STD180743NB-A20	0.0027	0.0029	0.0034	0.0040
Avg.	0.0022	0.0025	0.0029	0.0033
Min.	0.0017	0.0020	0.0024	0.0026
Max.	0.0027	0.0030	0.0034	0.0040
Med.	0.0022	0.0025	0.0030	0.0033
ST dev	0.0003	0.0003	0.0003	0.0003

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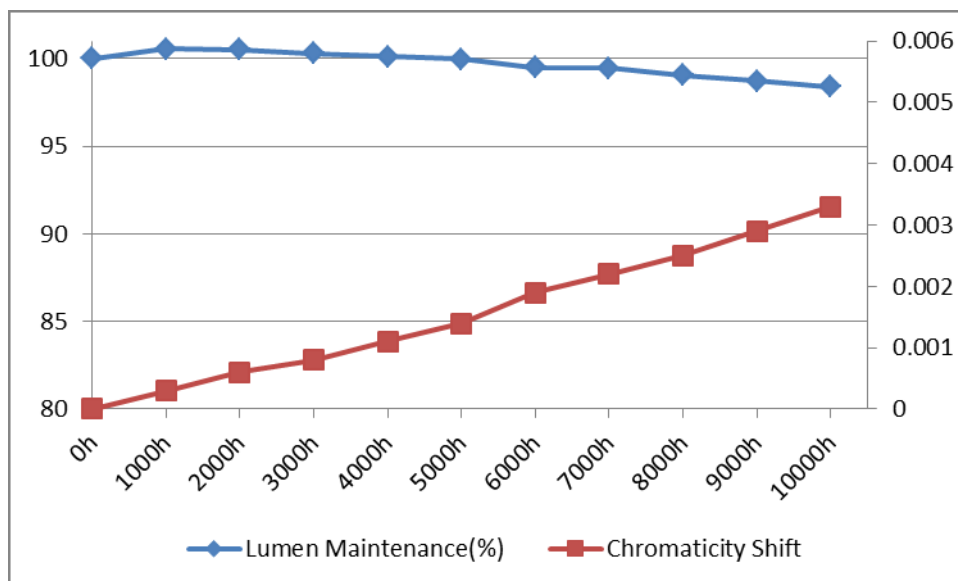
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2.2.1 Data Set 1, 105°C, 100mA (Lumen Maintenance)

Sample Number	Vf (V)	Im	Lumen Maintenance (%)					
	0hr		1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
STD180743NB-A21	9.221	96.19	99.99	99.79	99.30	98.91	98.50	97.83
STD180743NB-A22	9.206	96.80	99.90	99.74	99.31	99.02	98.45	97.84
STD180743NB-A23	9.119	95.11	99.99	99.77	99.43	99.16	98.81	97.97
STD180743NB-A24	9.230	94.55	100.18	99.97	99.61	98.94	98.59	97.87
STD180743NB-A25	9.227	98.46	100.19	99.98	99.66	99.18	98.24	98.24
STD180743NB-A26	9.214	97.25	100.10	99.93	99.55	98.84	98.53	98.07
STD180743NB-A27	9.209	99.67	99.90	99.74	99.39	99.01	98.69	98.01
STD180743NB-A28	9.198	98.00	99.98	99.93	99.64	99.16	98.56	98.13
STD180743NB-A29	9.111	95.89	100.05	99.78	99.44	99.22	98.78	97.78
STD180743NB-A30	9.124	94.53	100.18	99.81	99.27	99.05	98.52	98.04
STD180743NB-A31	9.192	96.19	100.07	99.85	99.42	99.17	98.79	98.24
STD180743NB-A32	9.186	96.05	100.17	99.97	99.50	98.98	98.30	97.91
STD180743NB-A33	9.203	95.11	100.19	99.61	99.20	98.90	98.62	98.15
STD180743NB-A34	9.196	94.49	100.11	99.77	99.29	98.80	98.48	97.98
STD180743NB-A35	9.117	96.66	100.32	99.72	99.14	98.85	98.50	98.13
STD180743NB-A36	9.209	95.34	100.27	99.69	99.43	99.02	98.47	98.11
STD180743NB-A37	9.197	95.65	100.11	99.83	99.51	99.05	98.65	98.41
STD180743NB-A38	9.214	97.07	99.91	99.59	99.19	99.03	98.63	98.39
STD180743NB-A39	9.199	95.68	99.99	99.83	99.37	98.90	98.33	97.93
STD180743NB-A40	9.215	96.20	100.14	99.81	99.42	98.99	98.49	98.22
Avg.	9.189	96.24	100.09	99.81	99.40	99.01	98.55	98.06
Min.	9.111	94.49	99.90	99.59	99.14	98.80	98.24	97.78
Max.	9.230	99.67	100.32	99.98	99.66	99.22	98.81	98.41
Med.	9.201	96.12	100.11	99.80	99.42	99.02	98.53	98.06
ST dev	0.0375	1.3233	0.1183	0.1086	0.1445	0.1197	0.1514	0.1753

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Sample Number	Lumen Maintenance (%)			
	7000hrs	8000hrs	9000hrs	10000hrs
STD180743NB-A21	97.27	96.69	96.10	95.15
STD180743NB-A22	97.43	97.02	95.79	95.36
STD180743NB-A23	97.31	96.59	95.88	95.31
STD180743NB-A24	97.37	96.99	96.27	95.03
STD180743NB-A25	97.61	96.98	96.28	95.08
STD180743NB-A26	97.41	96.99	96.33	94.98
STD180743NB-A27	97.52	96.73	96.28	95.53
STD180743NB-A28	97.50	96.95	96.12	95.48
STD180743NB-A29	97.29	96.99	96.22	95.15
STD180743NB-A30	97.41	96.85	96.01	95.41
STD180743NB-A31	97.51	96.74	96.20	95.08
STD180743NB-A32	97.21	96.88	95.74	95.00
STD180743NB-A33	97.42	96.67	95.73	95.39
STD180743NB-A34	97.33	96.98	96.01	95.33
STD180743NB-A35	97.61	96.61	95.91	95.25
STD180743NB-A36	97.55	96.71	95.89	95.45
STD180743NB-A37	97.49	96.61	95.81	95.44
STD180743NB-A38	97.61	96.80	96.09	95.49
STD180743NB-A39	97.26	97.06	96.18	95.42
STD180743NB-A40	97.41	96.69	96.24	95.31
Avg.	97.43	96.83	96.05	95.28
Min.	97.21	96.59	95.73	94.98
Max.	97.61	97.06	96.33	95.53
Med.	97.42	96.83	96.10	95.32
ST dev	0.1196	0.1550	0.1932	0.1741

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2.2.2 Data Set 1, 105°C, 100mA (Chromaticity Shift)

Sample Number	u'	v'	CCT(K)	Chromaticity Shift ($\Delta u'v'$)					
	0hr			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
STD180743NB-A21	0.2617	0.5282	2713	0.0003	0.0005	0.0009	0.0015	0.0018	0.0024
STD180743NB-A22	0.2608	0.5282	2732	0.0005	0.0006	0.0008	0.0012	0.0014	0.0016
STD180743NB-A23	0.2599	0.5265	2758	0.0002	0.0005	0.0008	0.0012	0.0015	0.0016
STD180743NB-A24	0.2610	0.5282	2727	0.0003	0.0005	0.0008	0.0009	0.0015	0.0020
STD180743NB-A25	0.2597	0.5284	2755	0.0004	0.0005	0.0010	0.0016	0.0018	0.0019
STD180743NB-A26	0.2601	0.5279	2748	0.0003	0.0004	0.0006	0.0010	0.0015	0.0022
STD180743NB-A27	0.2573	0.5264	2815	0.0002	0.0004	0.0007	0.0012	0.0017	0.0021
STD180743NB-A28	0.2595	0.5275	2762	0.0004	0.0007	0.0009	0.0013	0.0014	0.0019
STD180743NB-A29	0.2603	0.5285	2741	0.0003	0.0007	0.0009	0.0013	0.0016	0.0017
STD180743NB-A30	0.2577	0.5270	2805	0.0001	0.0005	0.0007	0.0011	0.0012	0.0014
STD180743NB-A31	0.2591	0.5283	2767	0.0003	0.0004	0.0009	0.0012	0.0016	0.0023
STD180743NB-A32	0.2605	0.5280	2739	0.0004	0.0005	0.0009	0.0015	0.0020	0.0022
STD180743NB-A33	0.2599	0.5265	2758	0.0005	0.0009	0.0010	0.0014	0.0019	0.0024
STD180743NB-A34	0.2610	0.5282	2728	0.0005	0.0006	0.0010	0.0014	0.0016	0.0023
STD180743NB-A35	0.2591	0.5277	2770	0.0006	0.0010	0.0012	0.0015	0.0020	0.0027
STD180743NB-A36	0.2594	0.5272	2766	0.0005	0.0006	0.0008	0.0013	0.0016	0.0023
STD180743NB-A37	0.2577	0.5266	2805	0.0002	0.0006	0.0007	0.0011	0.0017	0.0024
STD180743NB-A38	0.2593	0.5272	2769	0.0002	0.0005	0.0010	0.0014	0.0015	0.0020
STD180743NB-A39	0.2602	0.5285	2744	0.0002	0.0005	0.0007	0.0011	0.0017	0.0022
STD180743NB-A40	0.2575	0.5269	2808	0.0002	0.0003	0.0008	0.0010	0.0013	0.0018
Avg.	0.2596	0.5276	2761	0.0003	0.0006	0.0009	0.0013	0.0016	0.0021
Min.	0.2573	0.5264	2713	0.0001	0.0003	0.0006	0.0009	0.0012	0.0014
Max.	0.2617	0.5285	2815	0.0006	0.0010	0.0012	0.0016	0.0020	0.0027
Med.	0.2598	0.5278	2758	0.0003	0.0005	0.0009	0.0013	0.0016	0.0022
ST dev	0.0012	0.0007	28.2710	0.0001	0.0002	0.0001	0.0002	0.0002	0.0003

Laboratory: Standard-Tech Co., Ltd Testing Center

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Sample Number	Chromaticity Shift ($\Delta u'v'$)			
	7000hrs	8000hrs	9000hrs	10000hrs
STD180743NB-A21	0.0028	0.0035	0.0037	0.0038
STD180743NB-A22	0.0019	0.0020	0.0023	0.0030
STD180743NB-A23	0.0023	0.0027	0.0033	0.0035
STD180743NB-A24	0.0024	0.0032	0.0038	0.0047
STD180743NB-A25	0.0026	0.0028	0.0030	0.0036
STD180743NB-A26	0.0027	0.0031	0.0034	0.0035
STD180743NB-A27	0.0022	0.0028	0.0034	0.0040
STD180743NB-A28	0.0025	0.0032	0.0040	0.0046
STD180743NB-A29	0.0020	0.0025	0.0029	0.0039
STD180743NB-A30	0.0021	0.0022	0.0024	0.0031
STD180743NB-A31	0.0027	0.0031	0.0038	0.0041
STD180743NB-A32	0.0027	0.0031	0.0036	0.0045
STD180743NB-A33	0.0029	0.0032	0.0039	0.0043
STD180743NB-A34	0.0026	0.0027	0.0030	0.0031
STD180743NB-A35	0.0030	0.0033	0.0040	0.0049
STD180743NB-A36	0.0027	0.0029	0.0035	0.0038
STD180743NB-A37	0.0026	0.0031	0.0039	0.0044
STD180743NB-A38	0.0025	0.0030	0.0036	0.0041
STD180743NB-A39	0.0027	0.0031	0.0034	0.0038
STD180743NB-A40	0.0019	0.0024	0.0025	0.0035
Avg.	0.0025	0.0029	0.0034	0.0039
Min.	0.0019	0.0020	0.0023	0.0030
Max.	0.0030	0.0035	0.0040	0.0049
Med.	0.0026	0.0031	0.0035	0.0039
ST dev	0.0003	0.0004	0.0005	0.0005

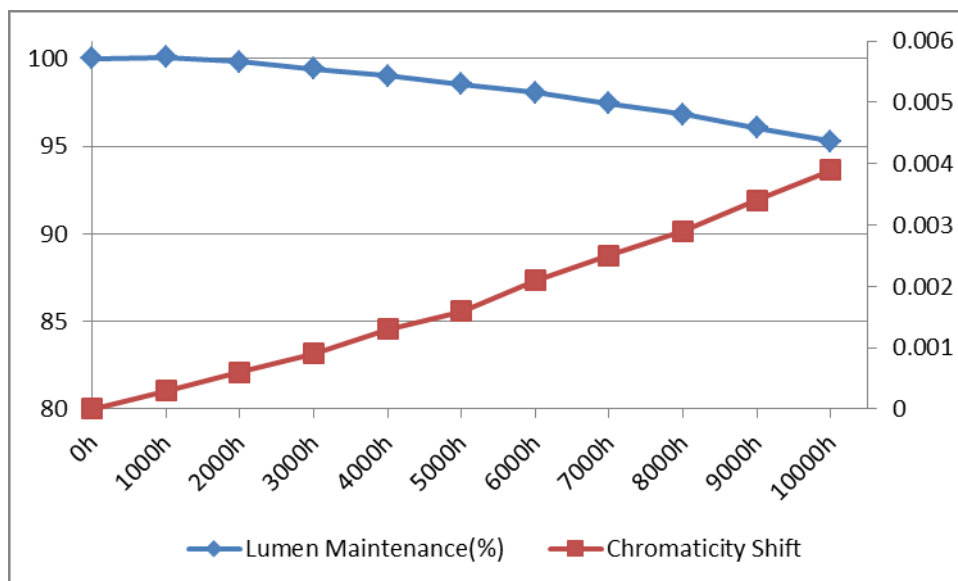
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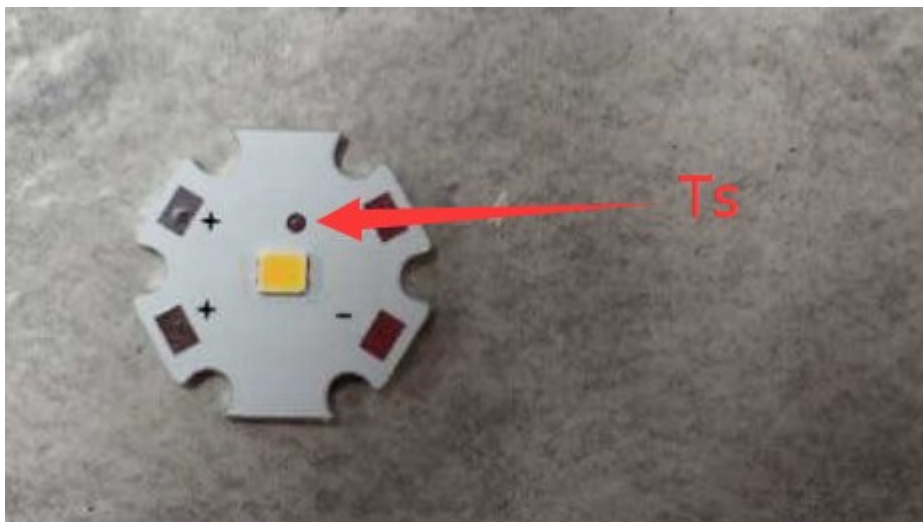
Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320

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3. Photo



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4. Certificate

United States Department of Commerce
National Institute of Standards and Technology

**Certificate of Accreditation to ISO/IEC 17025:2005**

NVLAP LAB CODE: 201011-0

Standard-tech Co., Ltd. Testing Center

Guangzhou
China

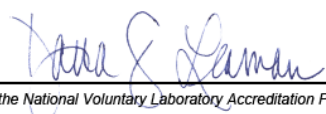
*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

Energy Efficient Lighting Products

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

2017-09-13 through 2018-09-30
Effective Dates




For the National Voluntary Laboratory Accreditation Program

Laboratory: Standard-Tech Co., Ltd Testing Center

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5. Test Equipment

Equipment ID	Equipment Name	Calibration Date	Calibration Date	Calibration Date	Next Calibration Date
ST-R-328	0.5m Integrating sphere	2016-07-01	2017-07-01	2018-07-01	2019-06-30
ST-R-333	Power Meter	2016-07-01	2017-07-01	2018-07-01	2019-06-30
ST-R-335	DC power source	2016-07-01	2017-07-01	2018-07-01	2019-06-30
ST-R-181A	Temperature Tester	2016-07-01	2017-07-01	2018-07-01	2019-06-30
Uncertainty: Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K					

******* END OF DATASHEET PACKAGE *******

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