



NVLAP LAB CODE:201045-0



TEST REPORT

IES LM-80-08

For

SHENZHEN LEPOWER OPTO ELECTRONIC CORP., LTD

3-5 Floors, Bldg B, Chuangfu Science Technology Park, Shihuan Rd No.202, Shangwu
Community, Shiyuan St, Bao'an District, Shenzhen

Report No.: R011605418L

Product Name: LED (SMD)

Model No.: LY-SMD3030

Test Initiation Date: 2016-05-16 to 2017-01-21

Revision Date: 2017-02-16

Test Completion Date: 2017-01-24

Tested By: Alcander Lou *Alcander Lou*

Reviewed By: Raymond Song *Raymond Song*

Prepared By: Shenzhen Anbotek Compliance Laboratory Limited
1/F., Building 1, SEC Industrial Park, No.0409 Qianhai Road,
Nanshan District, Shenzhen City, Guangdong, China
Tel: +86 755 2606 6365
Fax: +86 755 2601 4772
Web: www.anbotek.com.cn



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1 General Information

1.1 Product Description for Equipment under Test (EUT)

Applicant: SHENZHEN LEPOWER OPTO ELECTRONIC CORP., LTD

Tested Model: LY-SMD3030

Part Type: LED Package

Nominal CCT: 3000K

Number of LED Light Source tested: See tables

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 is 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: 2016-05-16

Test Duration: 2016-05-16 to 2017-01-21

1.2 Standards Used

IESNA LM-80-08: IES Approved Method for Measuring Lumen Maintenance of LED Light Sources

1.3 Test Facility Description

The test facility used by Shenzhen Anbotek Compliance Laboratory Limited is located at 1/F., Building 1, SEC Industrial Park, No.0409 Qianhai Road, Nanshan District, Shenzhen, Guangdong, China.

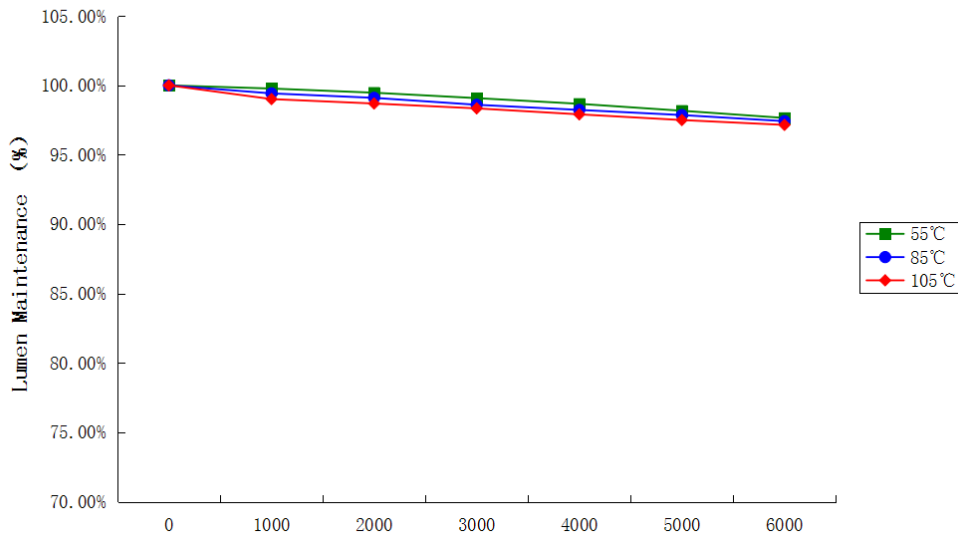
1.4 Test Equipment List

Device	Manufacture	Model No.	Serial No.	Calibration Date	Calibration Due Date
Digital Power Meter	YOKOGAWA	WT210	SE-074	2016-04-06	2017-04-05
LM-80 Aging Test System	KEYI	KY-3X-LH60	SE-564	2016-04-06	2017-04-05
DC Power Supply	ITECH	IT6832	SE-598	2016-06-23	2017-06-22
DC Power Supply	EVERFINE	WY605	SE-605	2016-06-23	2017-06-22
Standard Lamp	EVERFINE	D062	SE-606	2016-07-02	2017-07-01
Spectrum Analyzer	EVERFINE	HAAS-2000	SE-607	2016-06-23	2017-06-22
Integrating Sphere (0.5m)	EVERFINE	AIS-2	SE-608	2016-06-23	2017-06-22

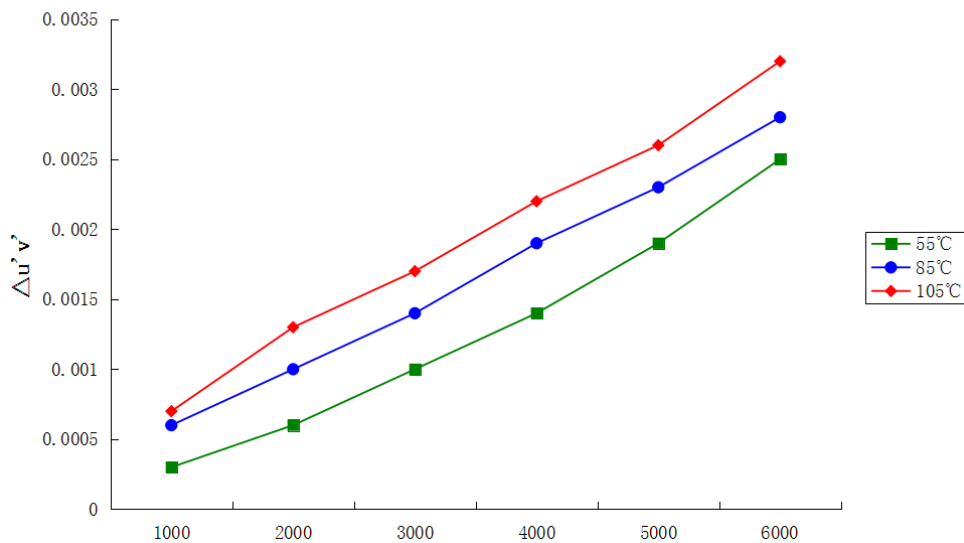
2 Summary of Test Result

Data Set	Case Temperature (Ts)	Ambient Temperature (Ta)	Drive Current	Average Lumen Maintenance at 6000 hours	Average Chromaticity Shift ($\Delta u'v'$) at 6000 hours
1	54.5°C	53.7°C	700 mA	97.65%	0.0025
2	84.3°C	83.6°C	700 mA	97.42%	0.0028
3	104.2°C	103.1°C	700 mA	97.15%	0.0032

Average Lumen Maintenance



Average $\Delta u'v'$



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 an integrating sphere. Each LED package is operated at rated drive current (CC Mode).

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 380-800nm.

3.2 Season the LED Package from 0 hours to 6000 hours

Three LM-80 aging measurement system Temperature Chambers are used for Seasoning, and the temperature is set to 55°C , 85°C , 105°C (manufacture defined), the airflow is minimum to keep the uniformity to temperature. LED packages are operated steady state (no cycling) for a period of 6000 hours, checked the lumen flux and Chromaticity Shift every 1000 hours. The samples are inspected at regular intervals (24 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 1: 55°C, 700 mA

Description of Light Sources Tested:	LY-SMD3030
Case Temperature:	54.5°C
Ambient Temperature:	53.7°C
Drive Current:	700 mA
Measure Current:	700 mA
Failures Observed:	None

Lumen Maintenance (%)

Sample No.	VF(V)	Φ(lm)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
L1	3.21	249.8	99.68%	99.48%	99.04%	98.85%	98.03%	97.51%
L2	3.21	249.4	99.70%	99.56%	99.08%	98.65%	98.20%	97.77%
L3	3.21	251.5	99.70%	99.28%	99.13%	98.65%	98.25%	97.66%
L4	3.21	253.0	100.08%	99.29%	99.05%	98.79%	98.23%	97.62%
L5	3.22	252.6	99.80%	99.56%	99.29%	98.58%	98.17%	97.79%
L6	3.22	244.7	99.70%	99.55%	99.14%	98.65%	98.28%	97.69%
L7	3.23	253.0	99.84%	99.37%	99.09%	98.54%	98.07%	97.63%
L8	3.22	257.1	99.70%	99.30%	99.03%	98.52%	98.21%	97.54%
L9	3.23	252.5	99.62%	99.56%	99.09%	98.64%	98.14%	97.59%
L10	3.21	252.0	99.70%	99.37%	99.17%	98.65%	98.09%	97.76%
L11	3.22	251.6	100.08%	99.44%	99.21%	98.58%	98.20%	97.70%
L12	3.23	252.1	99.72%	99.40%	98.89%	98.79%	98.11%	97.78%
L13	3.22	248.8	99.70%	99.48%	99.16%	98.61%	98.26%	97.72%
L14	3.22	248.4	99.76%	99.48%	99.07%	98.72%	98.13%	97.74%
L15	3.22	249.1	99.84%	99.28%	98.72%	98.75%	98.24%	97.65%
L16	3.23	255.3	99.92%	99.37%	99.37%	98.58%	98.08%	97.65%
L17	3.22	249.2	99.84%	99.80%	99.16%	98.68%	98.16%	97.51%
L18	3.22	250.7	99.80%	99.40%	99.16%	98.85%	98.29%	97.57%
L19	3.22	254.1	99.70%	99.45%	98.86%	98.81%	98.17%	97.70%
L20	3.21	245.5	99.88%	99.63%	99.27%	98.68%	98.06%	97.51%
L21	3.22	250.8	99.72%	99.60%	99.12%	98.75%	98.04%	97.78%
L22	3.22	246.7	99.70%	99.68%	99.03%	98.59%	98.15%	97.59%
L23	3.22	261.9	100.08%	99.62%	98.93%	98.53%	98.24%	97.50%
L24	3.21	256.8	99.70%	99.34%	99.03%	98.69%	98.18%	97.65%
L25	3.22	251.8	99.40%	99.56%	98.89%	98.69%	98.18%	97.60%
AV	3.22	251.5	99.77%	99.47%	99.08%	98.67%	98.17%	97.65%
MIN	3.21	244.7	99.40%	99.28%	98.72%	98.52%	98.03%	97.50%
MAX	3.23	261.9	100.08%	99.80%	99.37%	98.85%	98.29%	97.79%
STDEV	0.0059	3.7520	0.0015	0.0014	0.0014	0.0010	0.0008	0.0009
Number	25	25	25	25	25	25	25	25

Description of Light Sources Tested:	LY-SMD3030
Case Temperature:	54.5°C
Ambient Temperature:	53.7°C
Drive Current:	700 mA
Measure Current:	700 mA
Failures Observed:	None

Chromaticity Shift ($\Delta u'v'$)

Sample No.	u'	v'	CCT(K)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
L1	0.2474	0.5377	2977	0.0004	0.0006	0.0010	0.0014	0.0020	0.0024
L2	0.2459	0.5380	3011	0.0003	0.0005	0.0011	0.0014	0.0018	0.0024
L3	0.2461	0.5352	3022	0.0002	0.0006	0.0012	0.0012	0.0020	0.0025
L4	0.2467	0.5374	2996	0.0003	0.0007	0.0009	0.0013	0.0018	0.0026
L5	0.2457	0.5383	3013	0.0004	0.0004	0.0011	0.0015	0.0021	0.0027
L6	0.2512	0.5398	2883	0.0005	0.0006	0.0010	0.0013	0.0020	0.0026
L7	0.2475	0.5392	2967	0.0004	0.0005	0.0010	0.0016	0.0018	0.0027
L8	0.2484	0.5402	2941	0.0003	0.0003	0.0010	0.0015	0.0020	0.0025
L9	0.2442	0.5355	3065	0.0002	0.0006	0.0009	0.0012	0.0019	0.0026
L10	0.2491	0.5391	2933	0.0003	0.0005	0.0010	0.0014	0.0018	0.0025
L11	0.2464	0.5393	2992	0.0004	0.0006	0.0011	0.0015	0.0019	0.0026
L12	0.2495	0.5400	2918	0.0005	0.0004	0.0009	0.0014	0.0021	0.0024
L13	0.2495	0.5381	2930	0.0003	0.0005	0.0010	0.0013	0.0019	0.0026
L14	0.2434	0.5347	3088	0.0004	0.0007	0.0009	0.0014	0.0020	0.0025
L15	0.2449	0.5356	3048	0.0003	0.0006	0.0010	0.0013	0.0018	0.0027
L16	0.2484	0.5405	2941	0.0004	0.0005	0.0011	0.0012	0.0019	0.0025
L17	0.2504	0.5393	2903	0.0002	0.0004	0.0010	0.0014	0.0018	0.0026
L18	0.2491	0.5382	2936	0.0003	0.0006	0.0011	0.0014	0.0020	0.0024
L19	0.2477	0.5392	2963	0.0003	0.0005	0.0009	0.0013	0.0021	0.0026
L20	0.2474	0.5370	2982	0.0003	0.0006	0.0009	0.0013	0.0020	0.0027
L21	0.2465	0.5365	3006	0.0004	0.0007	0.0010	0.0013	0.0018	0.0025
L22	0.2451	0.5371	3034	0.0005	0.0005	0.0009	0.0015	0.0021	0.0025
L23	0.2394	0.5355	3181	0.0003	0.0006	0.0009	0.0014	0.0019	0.0024
L24	0.2432	0.5404	3058	0.0002	0.0007	0.0008	0.0016	0.0018	0.0025
L25	0.2415	0.5337	3142	0.0003	0.0006	0.0011	0.0014	0.0020	0.0025
AV	0.2466	0.5378	2997	0.0003	0.0006	0.0010	0.0014	0.0019	0.0025
MIN	0.2394	0.5337	2883	0.0002	0.0003	0.0008	0.0012	0.0018	0.0024
MAX	0.2512	0.5405	3181	0.0005	0.0007	0.0012	0.0016	0.0021	0.0027
STDEV	0.0028	0.0019	72	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Number	25	25	25	25	25	25	25	25	25

5 Data Set 2: 85°C, 700 mA

Description of Light Sources Tested:	LY-SMD3030
Case Temperature:	84.3°C
Ambient Temperature:	83.6°C
Drive Current:	700 mA
Measure Current:	700 mA
Failures Observed:	None

Lumen Maintenance (%)

Sample No.	V _F (V)	Φ(lm)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
L26	3.22	257.7	99.61%	99.11%	98.76%	98.30%	97.81%	97.55%
L27	3.22	252.0	99.40%	99.33%	98.53%	98.11%	97.87%	97.52%
L28	3.22	259.5	99.40%	99.46%	98.38%	98.37%	97.85%	97.55%
L29	3.22	246.5	99.47%	99.11%	98.34%	98.10%	97.93%	97.53%
L30	3.22	248.4	99.40%	99.03%	98.47%	98.38%	97.74%	97.50%
L31	3.21	247.9	99.72%	99.03%	98.55%	98.11%	98.00%	97.48%
L32	3.22	248.0	99.31%	99.48%	98.67%	98.13%	97.93%	97.26%
L33	3.22	248.0	99.40%	98.87%	98.63%	98.36%	97.93%	97.55%
L34	3.22	257.1	99.40%	99.03%	98.56%	98.38%	97.97%	97.30%
L35	3.21	255.3	99.27%	98.98%	98.47%	98.11%	97.72%	97.46%
L36	3.21	245.8	99.72%	98.90%	98.58%	98.18%	97.88%	97.41%
L37	3.22	247.9	99.31%	99.19%	98.67%	98.26%	97.99%	97.38%
L38	3.22	252.6	99.40%	99.25%	98.85%	98.20%	97.75%	97.20%
L39	3.21	251.0	99.24%	98.96%	98.57%	98.25%	97.83%	97.36%
L40	3.21	252.6	99.33%	99.01%	98.30%	98.29%	97.75%	97.26%
L41	3.22	250.7	99.40%	99.16%	98.76%	98.27%	97.72%	97.38%
L42	3.21	247.7	99.39%	99.03%	98.55%	98.29%	97.86%	97.21%
L43	3.21	248.7	99.40%	99.20%	98.63%	98.15%	97.92%	97.57%
L44	3.22	253.8	99.23%	99.01%	98.78%	98.20%	97.91%	97.22%
L45	3.21	250.7	99.20%	99.16%	98.76%	98.30%	97.90%	97.58%
L46	3.21	249.0	99.40%	98.88%	98.59%	98.20%	97.70%	97.40%
L47	3.22	256.1	99.49%	98.91%	98.63%	98.10%	97.93%	97.53%
L48	3.21	249.7	99.40%	99.24%	98.76%	98.15%	97.97%	97.45%
L49	3.21	250.7	99.56%	98.96%	98.60%	98.23%	97.80%	97.51%
L50	3.21	247.7	99.60%	99.15%	98.63%	98.21%	97.83%	97.22%
AV	3.22	251.0	99.42%	99.10%	98.60%	98.23%	97.86%	97.42%
MIN	3.21	245.8	99.20%	98.87%	98.30%	98.10%	97.70%	97.20%
MAX	3.22	259.5	99.72%	99.48%	98.85%	98.38%	98.00%	97.58%
STDEV	0.0044	3.7478	0.0014	0.0017	0.0014	0.0009	0.0009	0.0013
Number	25	25	25	25	25	25	25	25

Description of Light Sources Tested:	LY-SMD3030
Case Temperature:	84.3°C
Ambient Temperature:	83.6°C
Drive Current:	700 mA
Measure Current:	700 mA
Failures Observed:	None

Chromaticity Shift ($\Delta u'v'$)

Sample No.	u'	v'	CCT(K)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
L26	0.2430	0.5404	3064	0.0005	0.0009	0.0013	0.0020	0.0024	0.0028
L27	0.2459	0.5368	3019	0.0006	0.0010	0.0014	0.0019	0.0021	0.0028
L28	0.2459	0.5375	3013	0.0005	0.0011	0.0015	0.0018	0.0021	0.0028
L29	0.2505	0.5419	2888	0.0006	0.0010	0.0014	0.0019	0.0024	0.0028
L30	0.2437	0.5346	3084	0.0006	0.0009	0.0012	0.0019	0.0021	0.0027
L31	0.2493	0.5390	2928	0.0007	0.0008	0.0013	0.0020	0.0021	0.0027
L32	0.2495	0.5391	2923	0.0006	0.0007	0.0014	0.0018	0.0023	0.0029
L33	0.2508	0.5410	2886	0.0004	0.0009	0.0014	0.0017	0.0024	0.0028
L34	0.2485	0.5398	2941	0.0006	0.0008	0.0014	0.0019	0.0022	0.0027
L35	0.2485	0.5397	2942	0.0006	0.0009	0.0015	0.0019	0.0022	0.0028
L36	0.2475	0.5377	2976	0.0005	0.0010	0.0015	0.0018	0.0024	0.0027
L37	0.2451	0.5355	3044	0.0007	0.0011	0.0014	0.0019	0.0024	0.0026
L38	0.2484	0.5383	2952	0.0004	0.0012	0.0015	0.0019	0.0023	0.0029
L39	0.2476	0.5373	2977	0.0004	0.0011	0.0014	0.0018	0.0022	0.0028
L40	0.2481	0.5382	2959	0.0006	0.0009	0.0014	0.0018	0.0022	0.0026
L41	0.2472	0.5381	2980	0.0007	0.0009	0.0013	0.0020	0.0021	0.0029
L42	0.2500	0.5395	2910	0.0006	0.0008	0.0014	0.0019	0.0024	0.0026
L43	0.2454	0.5350	3040	0.0006	0.0009	0.0016	0.0019	0.0024	0.0026
L44	0.2476	0.5392	2965	0.0005	0.0011	0.0015	0.0019	0.0023	0.0027
L45	0.2444	0.5357	3058	0.0005	0.0010	0.0015	0.0017	0.0024	0.0027
L46	0.2501	0.5396	2908	0.0006	0.0009	0.0014	0.0020	0.0022	0.0026
L47	0.2450	0.5359	3044	0.0006	0.0011	0.0014	0.0018	0.0022	0.0029
L48	0.2409	0.5323	3167	0.0007	0.0010	0.0015	0.0017	0.0022	0.0028
L49	0.2415	0.5336	3143	0.0006	0.0009	0.0014	0.0019	0.0022	0.0028
L50	0.2458	0.5382	3012	0.0005	0.0010	0.0015	0.0018	0.0023	0.0028
AV	0.2468	0.5378	2993	0.0006	0.0010	0.0014	0.0019	0.0023	0.0028
MIN	0.2409	0.5323	2886	0.0004	0.0007	0.0012	0.0017	0.0021	0.0026
MAX	0.2508	0.5419	3167	0.0007	0.0012	0.0016	0.0020	0.0024	0.0029
STDEV	0.0027	0.0024	75	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Number	25	25	25	25	25	25	25	25	25

6 Data Set 3: 105°C, 700 mA

Description of Light Sources Tested:	LY-SMD3030
Case Temperature:	104.2°C
Ambient Temperature:	103.1°C
Drive Current:	700 mA
Measure Current:	700 mA
Failures Observed:	None

Lumen Maintenance (%)

Sample No.	V _F (V)	Φ(lm)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
L51	3.22	244.3	99.18%	98.77%	98.28%	98.03%	97.59%	97.29%
L52	3.22	248.1	98.91%	98.91%	98.47%	97.79%	97.41%	97.03%
L53	3.22	249.1	99.04%	98.84%	98.51%	97.90%	97.57%	97.09%
L54	3.20	248.3	99.07%	98.79%	98.39%	97.98%	97.58%	97.00%
L55	3.22	247.8	98.99%	98.51%	98.31%	98.10%	97.42%	97.15%
L56	3.22	249.3	99.20%	98.56%	98.32%	97.75%	97.44%	97.15%
L57	3.21	242.8	98.76%	98.60%	98.19%	97.92%	97.33%	97.02%
L58	3.22	249.2	99.24%	98.96%	98.35%	97.86%	97.57%	97.24%
L59	3.21	241.8	98.88%	98.80%	98.22%	97.95%	97.56%	97.13%
L60	3.22	252.9	99.21%	98.62%	98.02%	98.07%	97.44%	97.27%
L61	3.21	245.3	99.27%	98.70%	98.57%	97.95%	97.56%	97.23%
L62	3.21	247.8	98.91%	98.79%	98.31%	97.92%	97.53%	97.20%
L63	3.21	246.5	99.35%	98.70%	98.30%	98.09%	97.33%	97.20%
L64	3.22	249.6	99.08%	98.80%	98.04%	97.74%	97.57%	97.15%
L65	3.20	248.1	98.67%	98.95%	98.47%	98.01%	97.56%	97.23%
L66	3.22	245.9	99.02%	98.78%	98.70%	97.85%	97.43%	97.06%
L67	3.21	242.8	99.42%	98.72%	98.19%	98.04%	97.54%	97.26%
L68	3.22	255.1	98.71%	98.75%	98.04%	97.90%	97.51%	97.05%
L69	3.21	240.0	98.92%	98.33%	98.58%	97.79%	97.48%	97.21%
L70	3.21	251.8	98.93%	98.45%	98.41%	97.76%	97.52%	97.21%
L71	3.22	247.8	98.67%	98.55%	98.43%	97.92%	97.52%	97.10%
L72	3.27	246.2	98.98%	98.46%	98.50%	97.84%	97.55%	97.06%
L73	3.22	253.7	98.78%	98.70%	98.38%	97.91%	97.47%	97.24%
L74	3.22	249.8	98.80%	98.72%	98.28%	97.85%	97.56%	97.02%
L75	3.22	254.0	99.17%	98.54%	98.27%	97.78%	97.39%	97.20%
AV	3.22	247.9	99.01%	98.69%	98.34%	97.91%	97.50%	97.15%
MIN	3.20	240.0	98.67%	98.33%	98.02%	97.74%	97.33%	97.00%
MAX	3.27	255.1	99.42%	98.96%	98.70%	98.10%	97.59%	97.29%
STDEV	0.0125	3.8458	0.0021	0.0016	0.0017	0.0011	0.0008	0.0009
Number	25	25	25	25	25	25	25	25

Description of Light Sources Tested:	LY-SMD3030
Case Temperature:	104.2°C
Ambient Temperature:	103.1°C
Drive Current:	700 mA
Measure Current:	700 mA
Failures Observed:	None

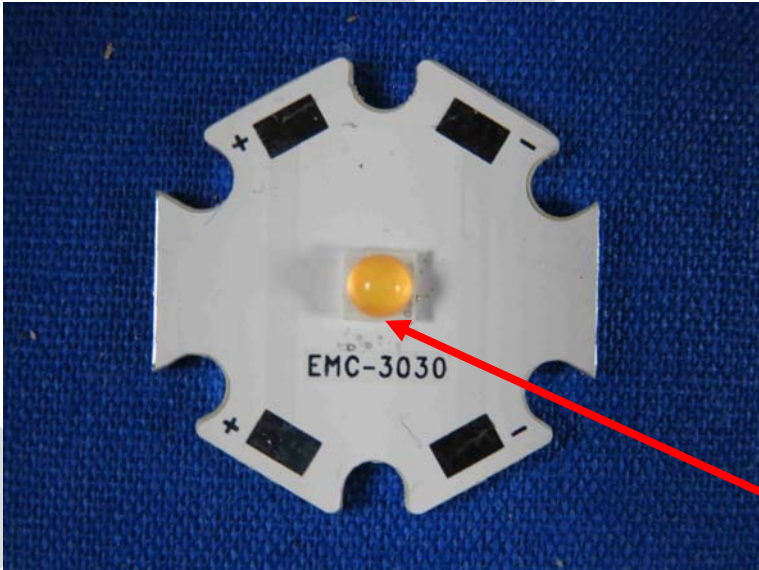
Chromaticity Shift ($\Delta u'v'$)

Sample No.	u'	v'	CCT(K)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
L51	0.2478	0.5386	2963	0.0007	0.0013	0.0018	0.0022	0.0027	0.0030
L52	0.2451	0.5349	3047	0.0006	0.0012	0.0018	0.0021	0.0024	0.0031
L53	0.2491	0.5413	2921	0.0007	0.0013	0.0018	0.0024	0.0028	0.0033
L54	0.2492	0.5391	2931	0.0008	0.0011	0.0017	0.0023	0.0028	0.0030
L55	0.2464	0.5364	3008	0.0007	0.0012	0.0016	0.0020	0.0027	0.0034
L56	0.2498	0.5400	2912	0.0007	0.0014	0.0017	0.0022	0.0024	0.0030
L57	0.2507	0.5422	2883	0.0006	0.0013	0.0018	0.0023	0.0028	0.0032
L58	0.2478	0.5391	2960	0.0009	0.0013	0.0017	0.0020	0.0026	0.0032
L59	0.2507	0.5380	2903	0.0005	0.0014	0.0016	0.0023	0.0026	0.0031
L60	0.2487	0.5403	2935	0.0006	0.0014	0.0016	0.0023	0.0027	0.0031
L61	0.2452	0.5371	3031	0.0005	0.0013	0.0016	0.0021	0.0024	0.0034
L62	0.2471	0.5362	2993	0.0007	0.0012	0.0015	0.0020	0.0025	0.0032
L63	0.2507	0.5391	2897	0.0008	0.0012	0.0017	0.0021	0.0027	0.0033
L64	0.2445	0.5354	3059	0.0007	0.0013	0.0017	0.0020	0.0028	0.0032
L65	0.2460	0.5352	3025	0.0009	0.0012	0.0019	0.0021	0.0027	0.0032
L66	0.2484	0.5398	2944	0.0006	0.0012	0.0017	0.0022	0.0025	0.0032
L67	0.2478	0.5369	2974	0.0005	0.0013	0.0018	0.0022	0.0026	0.0033
L68	0.2448	0.5378	3036	0.0006	0.0014	0.0015	0.0023	0.0025	0.0032
L69	0.2503	0.5452	2876	0.0006	0.0013	0.0018	0.0023	0.0027	0.0030
L70	0.2488	0.5395	2937	0.0007	0.0012	0.0017	0.0021	0.0025	0.0032
L71	0.2473	0.5363	2987	0.0007	0.0012	0.0016	0.0021	0.0025	0.0032
L72	0.2490	0.5413	2924	0.0008	0.0013	0.0018	0.0021	0.0026	0.0032
L73	0.2490	0.5396	2933	0.0009	0.0014	0.0018	0.0022	0.0027	0.0031
L74	0.2492	0.5391	2931	0.0008	0.0015	0.0017	0.0022	0.0025	0.0030
L75	0.2450	0.5368	3038	0.0007	0.0013	0.0018	0.0023	0.0024	0.0031
AV	0.2479	0.5386	2962	0.0007	0.0013	0.0017	0.0022	0.0026	0.0032
MIN	0.2445	0.5349	2876	0.0005	0.0011	0.0015	0.0020	0.0024	0.0030
MAX	0.2507	0.5452	3059	0.0009	0.0015	0.0019	0.0024	0.0028	0.0034
STDEV	0.0020	0.0024	55	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Number	25	25	25	25	25	25	25	25	25

7 TM-21 Projection

Table 1: Report at each LM-80 Test Condition					
Description of LED Light Source Tested (manufacturer, model, catalog number)		SHENZHEN LEPOWER OPTO ELECTRONCIS CORP., LTD LY-SMD3030			
Test Condition 1 - 55° C Case		Test Condition 2 - 85° C Case		Test Condition 3 - 105° C Case	
Sample size	25	Sample size	25	Sample size	25
Number of failures	0	Number of failures	0	Number of failures	0
DUT drive current used in the test (mA)	700	DUT drive current used in the test (mA)	700	DUT drive current used in the test (mA)	700
Test duration (hours)	6,000	Test duration (hours)	6,000	Test duration (hours)	6,000
Test duration used for projection (hour to hour)	1,000 - 6,000	Test duration used for projection (hour to hour)	1,000 - 6,000	Test duration used for projection (hour to hour)	1,000 - 6,000
Tested case temperature (° C)	55	Tested case temperature (° C)	85	Tested case temperature (° C)	105
α	4.314E-06	α	4.090E-06	α	3.874E-06
B	1.003	B	0.999	B	0.994
Calculated L70(6k) (hours)	83,000	Calculated L70(6k) (hours)	87,000	Calculated L70(6k) (hours)	91,000
Reported L70(6k) (hours)	>36000	Reported L70(6k) (hours)	>36000	Reported L70(6k) (hours)	>36000

8 Product Photo



TMP_{LED}

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