



# TEST REPORT

According to ANSI/IES LM-80-15  
For

**Hongli Zhihui Group Co.,Ltd. Guangzhou Branch**  
Room 316, Building 2, No.1, Xianke Yi Road, Huadong Town, Huadu District, Guangzhou, China

**Model: HL LM071H384W-80B18C18(Ra2)**

<b>Report Type:</b> 7000 Hours Test Report		<b>Product Type:</b> LED Array	
<b>Test Engineer:</b>	Pote Wang		
<b>Report Number:</b>	RSZ180418538-10-7000		
<b>Test Date:</b>	2018-04-24 to 2019-02-13		
<b>Report Date:</b>	2019-02-25		
<b>Reviewed By:</b>	Daniel Duan / EE Engineer		<i>Daniel</i>
<b>Test Facility:</b>	Test facility was located at No.69,Pulongcun ,Puxinhu Industrial Area, Tangxia , Dongguan, Guangdong, China.		
<b>Prepared By:</b>	Bay Area Compliance Laboratories Corp. (Dongguan). No.69,Pulongcun ,Puxinhu Industrial Area, Tangxia , Dongguan, Guangdong, China. Tel: +86-0769-86858888 Fax:+86-0769-86858588		
<b>Accreditation:</b>	The IAS Accreditation Number TL-460.		

**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 Bay Area Compliance Laboratories Corp. (Dongguan).

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## 1 - General Information

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### 1.1 Description of LED Light Sources

#### Sample Size:

40 PCS samples were received on 2018-04-18. The samples were numbered from 1 to 20 and 21 to 40.

Manufacturer:	Hongli Zhihui Group Co.,Ltd. Guangzhou Branch
Part Number:	HL LM071H384W-80B18C18(Ra2)
Part Type:	LED Array
Drive Level:	DC 2700mA
Nominal CCT:	2700K
Power:	156.2W
Average Current Density per LED die:	593.11 mA/mm <sup>2</sup>
Average Power Density per LED die:	1.9060 W/mm <sup>2</sup>
CRI:	80
Die Spacing:	0.22mm

#### Sampling Method:

LED samples for IESNA LM-80 testing consist of units built from a minimum of three manufacturing lots with each manufacturing lot built from different wafer lots built on non-consecutive days. These manufacturing lots are picked to represent a wide parametric distribution.

#### Family products covered by this report:

According to IESNA LM-80-15 Test Report No. RSZ180418538-10-7000

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Model type    Model name

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Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
2	0.0600	264.21	150	0.28	300
2	0.0600	264.21	150	0.28	300
2	0.0600	264.21	150	0.28	300
2	0.0600	264.21	150	0.28	300
1	0.0300	301.95	150	0.51	150
1	0.0300	301.95	150	0.51	150
1	0.0300	301.95	150	0.51	150
1	0.0300	301.95	150	0.51	150
1	0.0300	301.95	150	0.51	150
1	0.0300	301.95	150	0.51	150
1	0.0300	301.95	150	0.51	150
1	0.0300	301.95	150	0.51	150





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Model type	Model name	CRI (typ.)	CCT	Series	Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
Multiple models	HL-LMH02D90W-3B1C12(Ra2)	80	2700K	12	1	0.0300	325.63	150	1.33	150
		80	3000K	12	1	0.0300	325.63	150	1.33	150
		80	3500K	12	1	0.0300	325.63	150	1.33	150
		80	4000K	12	1	0.0300	325.63	150	1.33	150
		80	5000K	12	1	0.0300	325.63	150	1.33	150
		80	5700K	12	1	0.0300	325.63	150	1.33	150
		80	6000K	12	1	0.0300	325.63	150	1.33	150
		80	6500K	12	1	0.0300	325.63	150	1.33	150
Multiple models	HL-LM002D94W-9B4C12(Ra2)	80	2700K	12	4	0.1185	264.21	150	0.26	600
		80	3000K	12	4	0.1185	264.21	150	0.26	600
		80	3500K	12	4	0.1185	264.21	150	0.26	600
		80	4000K	12	4	0.1185	264.21	150	0.26	600
		80	5000K	12	4	0.1185	264.21	150	0.26	600
		80	5700K	12	4	0.1185	264.21	150	0.26	600
		80	6000K	12	4	0.1185	264.21	150	0.26	600
		80	6500K	12	4	0.1185	264.21	150	0.26	600
Multiple models	HL-LM002D94W-7B3C12(Ra2)	80	2700K	12	3	0.0889	264.21	150	0.44	450
		80	3000K	12	3	0.0889	264.21	150	0.44	450
		80	3500K	12	3	0.0889	264.21	150	0.44	450





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Model type	Model name	CRI (typ.)	CCT	Series	Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
Multiple models	HL-LM021H384W-12B1C24(Ra2)	80	2700K	24	1	0.0593	553.57	150	0.32	150
		80	3000K	24	1	0.0593	553.57	150	0.32	150
		80	3500K	24	1	0.0593	553.57	150	0.32	150
		80	4000K	24	1	0.0593	553.57	150	0.32	150
		80	5000K	24	1	0.0593	553.57	150	0.32	150
		80	5700K	24	1	0.0593	553.57	150	0.32	150
		80	6000K	24	1	0.0593	553.57	150	0.32	150
		80	6500K	24	1	0.0593	553.57	150	0.32	150
Multiple models	HL-LM021H384W-3B2C3(Ra2)	80	2700K	3	2	0.0148	553.57	150	1.09	300
		80	3000K	3	2	0.0148	553.57	150	1.09	300
		80	3500K	3	2	0.0148	553.57	150	1.09	300
		80	4000K	3	2	0.0148	553.57	150	1.09	300
		80	5000K	3	2	0.0148	553.57	150	1.09	300



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Model type	Model name	CRI (typ.)	CCT	Series	Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
		80	3500K	10	2	0.0494	553.57	150	0.32	300
		80	4000K	10	2	0.0494	553.57	150	0.32	300
		80	5000K	10	2	0.0494	553.57	150	0.32	300
		80	5700K	10	2	0.0494	553.57	150	0.32	300
		80	6000K	10	2	0.0494	553.57	150	0.32	300
		80	6500K	10	2	0.0494	553.57	150	0.32	300
Multiple models	HL-LM021H384W-12B2C12(Ra2)	80	2700K	12	2	0.0593	553.57	150	0.32	300
		80	3000K	12	2	0.0593	553.57	150	0.32	300
		80	3500K	12	2	0.0593	553.57	150	0.32	300
		80	4000K	12	2	0.0593	553.57	150	0.32	300
		80	5000K	12	2	0.0593	553.57	150	0.32	300
		80	5700K	12	2	0.0593	553.57	150	0.32	300
		80	6000K	12	2	0.0593	553.57	150	0.32	300
		80	6500K	12	2	0.0593	553.57	150	0.32	300
Multiple models	HL-LM021D90W-3B2C3(Ra2)	80	2700K	3	2	0.0148	316.33	150	0.97	300
		80	3000K	3	2	0.0148	316.33	150	0.97	300
		80	3500K	3	2	0.0148	316.33	150	0.97	300
		80	4000K	3	2	0.0148	316.33	150	0.97	300
		80	5000K	3	2	0.0148	316.33	150	0.97	300
		80	5700K	3	2	0.0148	316.33	150	0.97	300
		80	6000K	3	2	0.0148	316.33	150	0.97	300
		80	6500K	3	2	0.0148	316.33	150	0.97	300
Multiple models	HL-LM021D90W-5B2C5(Ra2)	80	2700K	5	2	0.0247	316.33	150	0.62	300
		80	3000K	5	2	0.0247	316.33	150	0.62	300
		80	3500K	5	2	0.0247	316.33	150	0.62	300
		80	4000K	5	2	0.0247	316.33	150	0.62	300
		80	5000K	5	2	0.0247	316.33	150	0.62	300
		80	5700K	5	2	0.0247	316.33	150	0.62	300
		80	6000K	5	2	0.0247	316.33	150	0.62	300
		80	6500K	5	2	0.0247	316.33	150	0.62	300
Multiple models	HL-LM021D90W-7B2C7(Ra2)	80	2700K	7	2	0.0346	316.33	150	0.37	300
		80	3000K	7	2	0.0346	316.33	150	0.37	300
		80	3500K	7	2	0.0346	316.33	150	0.37	300







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Model type	Model name	CRI (typ.)	CCT	Series	Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
Multiple models	HL-LM079H384W-9B4C12(Ra2)	80	2700K	12	4	0.1251	553.57	150	0.26	600
		80	3000K	12	4	0.1251	553.57	150	0.26	600
		80	3500K	12	4	0.1251	553.57	150	0.26	600
		80	4000K	12	4	0.1251	553.57	150	0.26	600
		80	5000K	12	4	0.1251	553.57	150	0.26	600
		80	5700K	12	4	0.1251	553.57	150	0.26	600
		80	6000K	12	4	0.1251	553.57	150	0.26	600
		80	6500K	12	4	0.1251	553.57	150	0.26	600
Multiple models	HL-LM093H384W-7B3C12(Ra2)	80	2700K	12	3	0.0939	553.57	150	0.43	450
		80	3000K	12	3	0.0939	553.57	150	0.43	450
		80	3500K	12	3	0.0939	553.57	150	0.43	450
		80	4000K	12	3	0.0939	553.57	150	0.43	450





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Model type	Model name	CRI (typ.)	CCT	Series	Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
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Model type	Model name	CRI (typ.)	CCT	Series	Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
		80	6000K	12	5	0.0711	211.36	120	0.3	600
		80	6500K	12	5	0.0711	211.36	120	0.3	600
Multiple models	HL-LM068D42W-24B5C12(Ra2)	80	2700K	12	5	0.045	241.56	120	0.5	600
		80	3000K	12	5	0.045	241.56	120	0.5	600
		80	3500K	12	5	0.045	241.56	120	0.5	600
		80	4000K	12	5	0.045	241.56	120	0.5	600
		80	5000K	12	5	0.045	241.56	120	0.5	600
		80	5700K	12	5	0.045	241.56	120	0.5	600
		80	6000K	12	5	0.045	241.56	120	0.5	600
		80	6500K	12	5	0.045	241.56	120	0.5	600
Multiple models	HL-LM068D94W-24B5C12(Ra2)	80	2700K	12	5	0.045	211.36	120	0.49	600
		80	3000K	12	5	0.045	211.36	120	0.49	600
		80	3500K	12	5	0.045	211.36	120	0.49	600
		80	4000K	12	5	0.045	211.36	120	0.49	600
		80	5000K	12	5	0.045	211.36	120	0.49	600
		80	5700K	12	5	0.045	211.36	120	0.49	600
		80	6000K	12	5	0.045	211.36	120	0.49	600
		80	6500K	12	5	0.045	211.36	120	0.49	600
Multiple models	HL-LM068D42W-32B8C12(Ra2)	80	2700K	12	8	0.072	241.56	120	0.27	960
		80	3000K	12	8	0.072	241.56	120	0.27	960
		80	3500K	12	8	0.072	241.56	120	0.27	960
		80	4000K	12	8	0.072	241.56	120	0.27	960
		80	5000K	12	8	0.072	241.56	120	0.27	960
		80	5700K	12	8	0.072	241.56	120	0.27	960
		80	6000K	12	8	0.072	241.56	120	0.27	960
		80	6500K	12	8	0.072	241.56	120	0.27	960
Multiple models	HL-LM068D94W-32B8C12(Ra2)	80	2700K	12	8	0.072	211.36	120	0.26	960
		80	3000K	12	8	0.072	211.36	120	0.26	960
		80	3500K	12	8	0.072	211.36	120	0.26	960
		80	4000K	12	8	0.072	211.36	120	0.26	960
		80	5000K	12	8	0.072	211.36	120	0.26	960
		80	5700K	12	8	0.072	211.36	120	0.26	960
		80	6000K	12	8	0.072	211.36	120	0.26	960
		80	6500K	12	8	0.072	211.36	120	0.26	960





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Model type	Model name	CRI (typ.)	CCT	Series	Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
		80	3500K	12	8	0.0957	260.50	120	0.38	960
		80	4000K	12	8	0.0957	260.50	120	0.38	960
		80	5000K	12	8	0.0957	260.50	120	0.38	960
		80	5700K	12	8	0.0957	260.50	120	0.38	960
		80	6000K	12	8	0.0957	260.50	120	0.38	960
		80	6500K	12	8	0.0957	260.50	120	0.38	960
Multiple models	HL-LMH03D90W-15B7C12(Ra2)	80	2700K	12	7	0.0838	260.50	120	0.48	840
		80	3000K	12	7	0.0838	260.50	120	0.48	840
		80	3500K	12	7	0.0838	260.50	120	0.48	840
		80	4000K	12	7	0.0838	260.50	120	0.48	840
		80	5000K	12	7	0.0838	260.50	120	0.48	840
		80	5700K	12	7	0.0838	260.50	120	0.48	840
		80	6000K	12	7	0.0838	260.50	120	0.48	840
		80	6500K	12	7	0.0838	260.50	120	0.48	840
Multiple models	HL-LMH03D90W-13B6C12(Ra2)	80	2700K	12	6	0.0718	260.50	120	0.65	720
		80	3000K	12	6	0.0718	260.50	120	0.65	720
		80	3500K	12	6	0.0718	260.50	120	0.65	720
		80	4000K	12	6	0.0718	260.50	120	0.65	720



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Model type	Model name	CRI (typ.)	CCT	Series	Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
		80	5000K	12	10	0.118	211.36	120	0.26	1200
		80	5700K	12	10	0.118	211.36	120	0.26	1200
		80	6000K	12	10	0.118	211.36	120	0.26	1200
		80	6500K	12	10	0.118	211.36	120	0.26	1200
Multiple models	HL-LM003D94W-17B8C12(Ra2)	80	2700K	12	8	0.0944	211.36	120	0.4	960
		80	3000K	12	8	0.0944	211.36	120	0.4	960
		80	3500K	12	8	0.0944	211.36	120	0.4	960
		80	4000K	12	8	0.0944	211.36	120	0.4	960
		80	5000K	12	8	0.0944	211.36	120	0.4	960
		80	5700K	12	8	0.0944	211.36	120	0.4	960
		80	6000K	12	8	0.0944	211.36	120	0.4	960
		80	6500K	12	8	0.0944	211.36	120	0.4	960
Multiple models	HL-LM003D94W-15B7C12(Ra2)	80	2700K	12	7	0.0826	211.36	120	0.36	840
		80	3000K	12	7	0.0826	211.36	120	0.36	840
		80	3500K	12	7	0.0826	211.36	120	0.36	840
		80	4000K	12	7	0.0826	211.36	120	0.36	840
		80	5000K	12	7	0.0826	211.36	120	0.36	840
		80	5700K	12	7	0.0826	211.36	120	0.36	840
		80	6000K	12	7	0.0826	211.36	120	0.36	840
		80	6500K	12	7	0.0826	211.36	120	0.36	840
Multiple models	HL-LM003D94W-13B6C12(Ra2)	80	2700K	12	6	0.0708	211.36	120	0.63	720
		80	3000K	12	6	0.0708	211.36	120	0.63	720
		80	3500K	12	6	0.0708	211.36	120	0.63	720
		80	4000K	12	6	0.0708	211.36	120	0.63	720
		80	5000K	12	6	0.0708	211.36	120	0.63	720
		80	5700K	12	6	0.0708	211.36	120	0.63	720
		80	6000K	12	6	0.0708	211.36	120	0.63	720
		80	6500K	12	6	0.0708	211.36	120	0.63	720
Multiple models	HL-LM003D94W-11B5C12(Ra2)	80	2700K	12	5	0.059	211.36	120	0.51	600
		80	3000K	12	5	0.059	211.36	120	0.51	600
		80	3500K	12	5	0.059	211.36	120	0.51	600
		80	4000K	12	5	0.059	211.36	120	0.51	600
		80	5000K	12	5	0.059	211.36	120	0.51	600
		80	5700K	12	5	0.059	211.36	120	0.51	600







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Model type	Model name	CRI (typ.)	CCT	Series	Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
Multiple models	HL-LM003D42W-11B5C12(Ra2)	80	2700K	12	5	0.0598	241.56	120	0.67	600
		80	3000K	12	5	0.0598	241.56	120	0.67	600
		80	3500K	12	5	0.0598	241.56	120	0.67	600
		80	4000K	12	5	0.0598	241.56	120	0.67	600
		80	5000K	12	5	0.0598	241.56	120	0.67	600
		80	5700K	12	5	0.0598	241.56	120	0.67	600
		80	6000K	12	5	0.0598	241.56	120	0.67	600
		80	6500K	12	5	0.0598	241.56	120	0.67	600
Multiple models	HL-LML03H421W-20B10C12(Ra2)	80	2700K	12	10	0.0698	401.85	70	0.56	700
		80	3000K	12	10	0.0698	401.85	70	0.56	700
		80	3500K	12	10	0.0698	401.85	70	0.56	700
		80	4000K	12	10	0.0698	401.85	70	0.56	700
		80	5000K	12	10	0.0698	401.85	70	0.56	700
		80	5700K	12	10	0.0698	401.85	70	0.56	700
		80	6000K	12	10	0.0698	401.85	70	0.56	700
		80	6500K	12	10	0.0698	401.85	70	0.56	700
Multiple models	HL-LML03H421W-17B8C12(Ra2)	80	2700K	12	8	0.0558	401.85	70	0.56	560
		80	3000K	12	8	0.0558	401.85	70	0.56	560
		80	3500K	12	8	0.0558	401.85	70	0.56	560
		80	4000K	12	8	0.0558	401.85	70	0.56	560
		80	5000K	12	8	0.0558	401.85	70	0.56	560
		80	5700K	12	8	0.0558	401.85	70	0.56	560
		80	6000K	12	8	0.0558	401.85	70	0.56	560
		80	6500K	12	8	0.0558	401.85	70	0.56	560
Multiple models	HL-LML03H421W-15B7C12(Ra2)	80	2700K	12	7	0.0489	401.85	70	0.69	490
		80	3000K	12	7	0.0489	401.85	70	0.69	490
		80	3500K	12	7	0.0489	401.85	70	0.69	490
		80	4000K	12	7	0.0489	401.85	70	0.69	490
		80	5000K	12	7	0.0489	401.85	70	0.69	490
		80	5700K	12	7	0.0489	401.85	70	0.69	490
		80	6000K	12	7	0.0489	401.85	70	0.69	490
		80	6500K	12	7	0.0489	401.85	70	0.69	490
Multiple models	HL-LML03H421W-13B6C12(Ra2)	80	2700K	12	6	0.0419	401.85	70	0.94	420
		80	3000K	12	6	0.0419	401.85	70	0.94	420

















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UNAVAILABLE





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Model type	Model name	CRI (typ.)	CCT	Series	Parallel	Power density (W/mm <sup>2</sup> )	Current density per LED die (mA/mm <sup>2</sup> )	Current per die (mA)	Distance between of dies (mm)	Current (mA)
		80	5000K	12	18	0.0992	241.56	120	0.67	2160
		80	5700K	12	18	0.0992	241.56	120	0.67	2160
		80	6000K	12	18	0.0992	241.56	120	0.67	2160
		80	6500K	12	18	0.0992	241.56	120	0.67	2160
Multiple models	HL-LM071D42W-35B16C12(Ra2)	80	2700K	12	16	0.0882	241.56	120	0.52	1920
		80	3000K	12	16	0.0882	241.56	120	0.52	1920
		80	3500K	12	16	0.0882	241.56	120	0.52	1920
		80	4000K	12	16	0.0882	241.56	120	0.52	1920
		80	5000K	12	16	0.0882	241.56	120	0.52	1920
		80	5700K	12	16	0.0882	241.56	120	0.52	1920
		80	6000K	12	16	0.0882	241.56	120	0.52	1920
Multiple models	HL-LM071D42W-25B12C12(Ra2)	80	2700K	12	12	0.0661	241.56	120	0.54	1440
		80	3000K	12	12	0.0661	241.56	120	0.54	1440
		80	3500K	12	12	0.0661	241.56	120	0.54	1440
		80	4000K	12	12	0.0661	241.56	120	0.54	1440
		80	5000K	12	12	0.0661	241.56	120	0.54	1440
		80	5700K	12	12	0.0661	241.56	120	0.54	1440
		80	6000K	12	12	0.0661	241.56	120	0.54	1440
		80	6500K	12	12	0.0661	241.56	120	0.54	1440
Multiple models	HL-LM071D42W-22B11C12(Ra2)	80	2700K	12	11	0.0606	241.56	120	0.67	1320
		80	3000K	12	11	0.0606	241.56	120	0.67	1320
		80	3500K	12	11	0.0606	241.56	120	0.67	1320
		80	4000K	12	11	0.0606	241.56	120	0.67	1320
		80	5000K	12	11	0.0606	241.56	120	0.67	1320
		80	5700K	12	11	0.0606	241.56	120	0.67	1320
		80	6000K	12	11	0.0606	241.56	120	0.67	1320
		80	6500K	12	11	0.0606	241.56	120	0.67	1320
Multiple models	HL-LML04H421W-40B18C12 (Ra2)	80	2700K	12	18	0.0579	401.85	70	0.7	1260
		80	3000K	12	18	0.0579	401.85	70	0.7	1260
		80	3500K	12	18	0.0579	401.85	70	0.7	1260
		80	4000K	12	18	0.0579	401.85	70	0.7	1260
		80	5000K	12	18	0.0579	401.85	70	0.7	1260
		80	5700K	12	18	0.0579	401.85	70	0.7	1260



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Model type      Model name

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Samples were connected to DC power supply in series circuits with a constant current. The forward current was regulated to within  $\pm 3\%$  of the specified value of the manufacturer.

The relative humidity within chamber was kept less than 65% during test.

For photometry measurement, the ambient temperature during test was set to  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , RH <65%.

### 1.6 Photometric Measurement Method and Uncertainty

Integrating sphere and spectroradiometer is used to measure luminous flux and chromaticity coordinate  $u_v$ . 2 measurement was used and sample was driven by DC power supply. The forward current was regulated to within  $\pm 0.5\%$  of the nominal value. The test system was calibrated by halogen reference lamp. The ambient temperature during test was set to  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , RH <65%. The temperature measurement point was located in the sphere and the temperature was detected by a temperature probe.

The uncertainty of the light output measurements is  $U=1.59\%$  ( $K=2$ ), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is  $U=21\text{K}$  ( $K=2$ ), at the 95% confidence level.

The uncertainty of the temperature is  $U=0.8671^{\circ}\text{C}$  ( $K=2$ ), at the 95% confidence level.

### 1.7 Statement of Traceability

Bay Area Compliance Laboratories Corp. (Dongguan) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).



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### 1.8 Sample Set

#### Data Set 1: 85°C, 2700mA

Part Number: HL LM071H384W-80B18C18(Ra2)  
Number of Units: 20  
Case Temperature: >83°C  
Ambient Temperature: >80°C  
Life Test Drive Current: 2700mA  
Measurement Current: 2700mA

#### Data Set 2: 105°C, 2700mA

Part Number: HL LM071H384W-80B18C18(Ra2)  
Number of Units: 20  
Case Temperature: >103°C  
Ambient Temperature: >100°C  
Life Test Drive Current: 2700mA  
Measurement Current: 2700mA





## 2 - Summary of Test Result

Data Set:	Sample Size	Failures Observed:	Test Interval	Test Duration			Reported TM-21 L <sub>70</sub> Lifetime	Reported TM-21 L <sub>80</sub> Lifetime	Reported TM-21 L <sub>90</sub> Lifetime
1	20	0	1000hrs	7000hrs	3.258E-06	1.001	>42000hrs	>42000hrs	33000hrs
2	20	0	1000hrs	7000hrs	3.932E-06	0.996	>42000hrs	>42000hrs	26000hrs

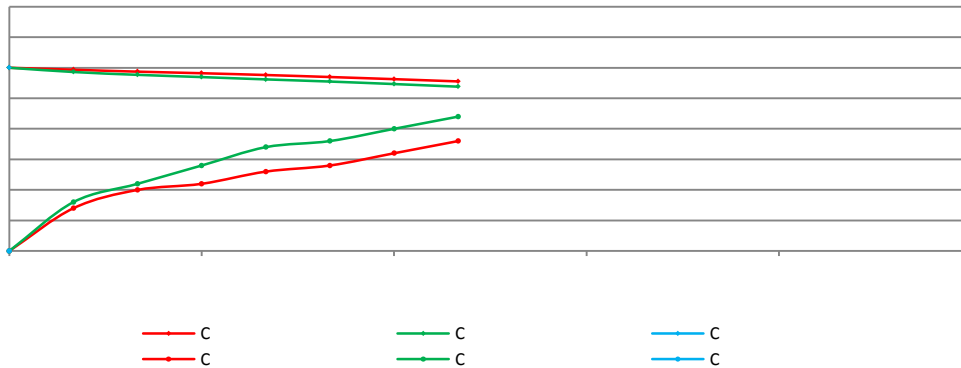
Average Lumen Maintenance (Percentage of Initial Luminous Flux)

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs	7000hrs
1	99.67%	99.36%	99.10%	98.81%	98.48%	98.13%	97.76%
2	99.30%	98.84%	98.47%	98.09%	97.74%	97.33%	96.90%

Average Chromaticity Shift

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs	7000hrs
1	0.0007	0.0010	0.0011	0.0013	0.0014	0.0016	0.0018
2	0.0008	0.0011	0.0014	0.0017	0.0018	0.0020	0.0022

Average Lumen Maintenance and Chromaticity Shift VS. Time





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**3.3 Data Set 1, 85°C, 2700mA (Chromaticity Shift)**

No.			CCT(K)							
	0hr(Initial)			1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs	7000hrs
1	0.2622	0.5287	2702	0.0007	0.0010	0.0014	0.0008	0.0008	0.0008	0.0011
2	0.2625	0.5277	2698	0.0005	0.0010	0.0006	0.0002	0.0003	0.0006	0.0007
3	0.2622	0.5272	2708	0.0005	0.0011	0.0009	0.0005	0.0001	0.0006	0.0009
4	0.2630	0.5273	2690	0.0006	0.0002	0.0008	0.0011	0.0016	0.0021	0.0022
5	0.2626	0.5285	2694	0.0010	0.0010	0.0011	0.0016	0.0020	0.0023	0.0025
6	0.2626	0.5284	2694	0.0008	0.0012	0.0014	0.0016	0.0020	0.0023	0.0026

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### 3.6 Data Set 2, 105°C, 2700mA (Chromaticity Shift)

No.	0hr(Initial)		CCT(K)							
				1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs	7000hrs
21	0.2634	0.5285	2678	0.0006	0.0011	0.0013	0.0016	0.0021	0.0022	0.0026
22	0.2643	0.5283	2660	0.0007	0.0010	0.0010	0.0013	0.0016	0.0019	0.0023
23	0.2644	0.5296	2652	0.0006	0.0012	0.0011	0.0014	0.0018		

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