



# 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-AS-2835IR2C-L1-08-PCT**

<b>Report Type:</b> 6000 Hours Test Report	<b>Product Type:</b> LED Package
<b>Reviewed By:</b> Pote Wang	<i>Pote Wang</i>
<b>Report Number:</b>	RSZ190428534-10-6000
<b>Test Date:</b>	2020-01-04 to 2020-10-15
<b>Report Date:</b>	2020-10-23
<b>Approved by:</b>	Blake Zhang / EE Engineer
<b>Test Facility:</b>	Test facility was located at No.69,Pulongcun ,Puxihu Industrial Area, Tangxia , Dongguan, Guangdong, China.
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<b>Accreditation:</b>	The IAS Accreditation Number TL-460.



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

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Dongguan, Guangdong, China.

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### 1.8 Sample Set

#### Data Set 1: 85°C, 150mA

Part Number: HL-AS-2835IR2C-L1-08-PCT  
Number of Units: 30  
Case Temperature: >83°C  
Ambient Temperature: >80°C  
Life Test Drive Current: 150mA  
Measurement Current: 150mA

#### Data Set 2: 105°C, 150mA

Part Number: HL-AS-2835IR2C-L1-08-PCT  
Number of Units: 30  
Case Temperature: >103°C  
Ambient Temperature: >100°C  
Life Test Drive Current: 150mA  
Measurement Current: 150mA



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### 2 - Summary of Test Result

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Data Set:	Sample Size	Failures Observed:	Test Interval	Test Duration		Reported TM-21 Q <sub>70</sub> Lifetime	Reported TM-21 Q <sub>90</sub> Lifetime
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### 3 - Test Data

#### 3.1 Data Set 1, 85°C, 150mA (700-800nm Photon Flux Maintenance)

No.	p,fr ( $\mu\text{mol} \times \text{s}^{-1}$ )	700-800nm Photon Flux Maintenance (%)					
		0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs
1	0.6826	100.69	100.44	100.12	99.88	99.56	99.33
2	0.6542	100.50	100.20	99.89	99.60	99.34	99.11
3	0.6904	100.43	100.16	100.03	99.93	99.64	99.26
4	0.6861	100.64	100.19	99.78	99.56	99.34	99.07
5	0.6915	100.58	100.27	100.19	99.91	99.52	99.36
6	0.6886	101.00	100.68	100.25	100.01	99.81	99.51
7	0.7030	100.85	100.40	100.26	99.91	99.72	99.46
8	0.6869	100.92	100.54	100.51	100.20	99.93	99.53
9	0.6831	100.07	99.71	99.33	99.06	98.76	98.54
10	0.6826	100.64	100.29	100.26	99.99	99.66	99.40
11	0.6888	100.36	100.13	100.00	99.67	99.30	98.95
12	0.6939	99.67	99.35	99.18	98.83	98.60	98.34
13	0.6813	99.94	99.56	99.05	98.77	98.49	98.21
14	0.6948	99.90	99.61	99.45	99.32	99.14	98.79
15	0.6911	100.29	100.01	99.67	99.42	99.15	98.78
16	0.6867	100.32	100.06	99.87	99.64	99.45	99.24
17	0.6930	100.03	99.70	99.64	99.34	99.00	98.63
18	0.6895	100.48	100.03	99.64	99.33	99.14	98.87
19	0.6945	99.88	99.55	99.06	98.73	98.47	98.26
20	0.6831	99.72	99.43	99.19	98.99	98.68	98.42
21	0.6831	100.23	99.90	99.74	99.39	98.99	98.61
22	0.6955	99.84	99.45	99.37	99.08	98.78	98.55
23	0.6936	99.99	99.68	99.60	99.28	99.03	98.75
24	0.6892	99.91	99.41	99.19	98.96	98.69	98.35
25	0.6862	99.24	98.92	98.91	98.59	98.25	97.87
26	0.6932	99.57	99.22	99.16	99.05	98.73	98.49
27	0.6892	99.65	99.25	99.07	98.87	98.51	98.10
28	0.6973	100.06	99.56	99.44	99.08	98.78	98.51
29	0.6966	100.07	99.71	99.02	98.82	98.56	98.21
30	0.6791	100.04	99.57	99.19	99.00	98.72	98.47
Avg.	0.6883	100.18	99.83	99.60	99.34	99.06	98.77
Med.	0.6892	100.07	99.71	99.62	99.33	99.02	98.69
st dev	0.0085	0.43	0.44	0.46	0.45	0.46	0.47
Min.	0.6542	99.24	98.92	98.91	98.59	98.25	97.87
Max.	0.7030	101.00	100.68	100.51	100.20	99.93	99.53



**3.2 Data Set 1, 85°C, 150mA (Forward Voltage)**

No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	2.112	2.141	2.127	2.127	2.128	2.128	2.129
2	2.120	2.198	2.157	2.149	2.147	2.147	2.148
3	2.104	2.126	2.113	2.114	2.118	2.116	2.120
4	2.098	2.118	2.102	2.110	2.110	2.115	2.113
5	2.143	2.165	2.149	2.149	2.160	2.156	2.161
6	2.156	2.182	2.169	2.171	2.176	2.173	2.176
7	2.164	2.187	2.167	2.167	2.180	2.179	2.181
8	2.138	2.164	2.146	2.144	2.166	2.159	2.157
9	2.116	2.143	2.123	2.125	2.136	2.133	2.138
10	2.113	2.142	2.123	2.134	2.151	2.144	2.149
11	2.156	2.184	2.172	2.165	2.179	2.169	2.174
12	2.150	2.179	2.164	2.160	2.171	2.180	2.177
13	2.107	2.132	2.120	2.114	2.127	2.124	2.126
14	2.147	2.173	2.160	2.153	2.168	2.168	2.167
15	2.136	2.159	2.147	2.143	2.159	2.154	2.153
16	2.122	2.146	2.134	2.126	2.143	2.149	2.144
17	2.135	2.160	2.146	2.140	2.154	2.164	2.156
18	2.114	2.136	2.121	2.116	2.131	2.132	2.133
19	2.143	2.164	2.151	2.145	2.164	2.163	2.162
20	2.114	2.138	2.124	2.118	2.135	2.135	2.138
21	2.108	2.128	2.118	2.108	2.124	2.122	2.132
22	2.151	2.173	2.160	2.152	2.172	2.167	2.173
23	2.126	2.147	2.139	2.128	2.162	2.147	2.147
24	2.110	2.133	2.123	2.113	2.130	2.128	2.128
25	2.108	2.132	2.119	2.110	2.130	2.128	2.126
26	2.108	2.128	2.120	2.109	2.128	2.129	2.129
27	2.111	2.133	2.121	2.113	2.131	2.132	2.130
28	2.144	2.162	2.157	2.145	2.162	2.161	2.165
29	2.161	2.182	2.173	2.161	2.176	2.180	2.181
30	2.117	2.139	2.131	2.125	2.137	2.137	2.139
Avg.	2.128	2.153	2.139	2.134	2.149	2.147	2.148
Med.	2.121	2.147	2.137	2.131	2.149	2.147	2.148
st dev	0.020	0.022	0.020	0.020	0.020	0.020	0.020
Min.	2.098	2.118	2.102	2.108	2.110	2.115	2.113
Max.	2.164	2.198	2.173	2.171	2.180	2.180	2.181







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### 3.4 Data Set 2, 105°C, 150mA (700-800nm Photon Flux Maintenance)

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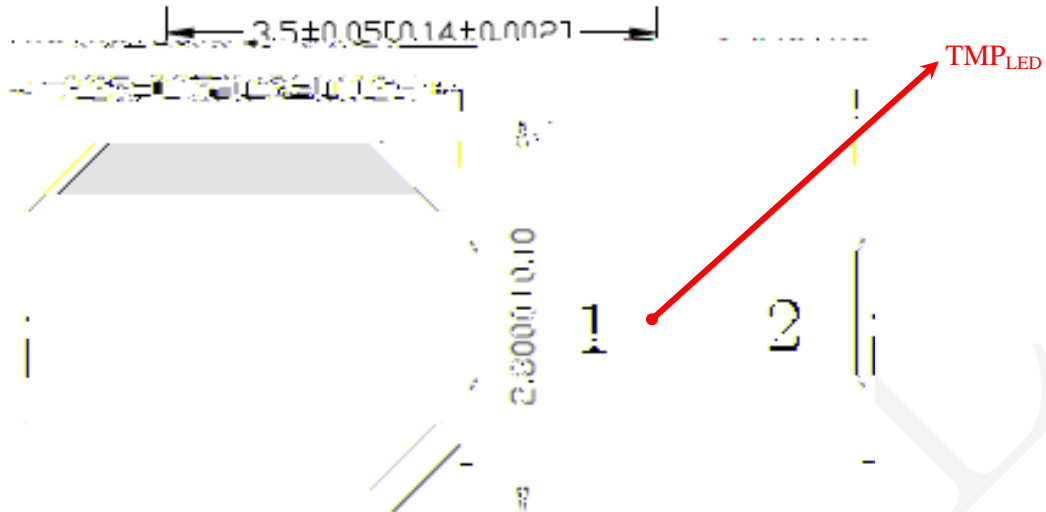
**3.5 Data Set 2, 105°C, 150mA (Forward Voltage)**

No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
31	2.118	2.161	2.135	2.127	2.140	2.140	2.145
32	2.106	2.148	2.124	2.113	2.130	2.127	2.129
33	2.114	2.153	2.132	2.118	2.135	2.132	2.134
34	2.119	2.157	2.134	2.123	2.138	2.136	2.136
35	2.133	2.170	2.145	2.134	2.149	2.154	2.163
36	2.150	2.189	2.164	2.153	2.169	2.169	2.182
37	2.112	2.177	2.156	2.146	2.166	2.162	2.171
38	2.103	2.138	2.114	2.108	2.124	2.122	2.133
39	2.153	2.189	2.169	2.155	2.173	2.169	2.176
40	2.099	2.133	2.115	2.102	2.120	2.111	2.131
41	2.121	2.156	2.131	2.121	2.144	2.135	2.141
42	2.148	2.181	2.159	2.148	2.171	2.164	2.165
43	2.098	2.128	2.108	2.101	2.119	2.114	2.116
44	2.113	2.143	2.124	2.115	2.131	2.129	2.132
45	2.123	2.153	2.134	2.125	2.139	2.140	2.147
46	2.151	2.184	2.169	2.153	2.169	2.170	2.176
47	2.136	2.165	2.153	2.138	2.152	2.152	2.156
48	2.135	2.167	2.158	2.138	2.152	2.158	2.163
49	2.115	2.147	2.137	2.120	2.132	2.138	2.138
50	2.155	2.186	2.178	2.156	2.171	2.173	2.177
51	2.110	2.170	2.159	2.144	2.153	2.159	2.161
52	2.112	2.143	2.139	2.117	2.133	2.129	2.134

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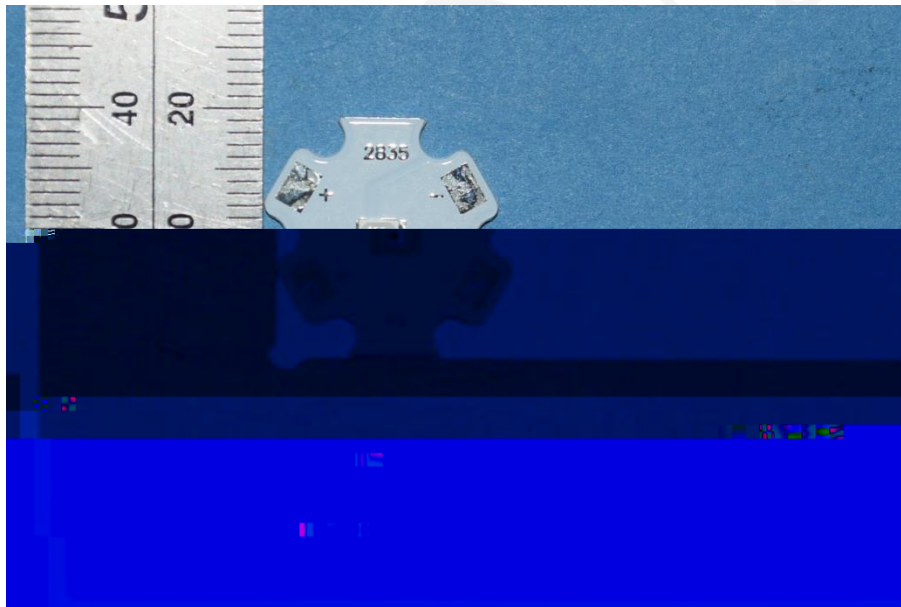
#### 4 - DUT Photo

##### 4.1 #Mechanical Dimensions



All dimensions are in millimeter

##### 4.2 DUT Photo





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### Directions

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\*\*\*\*\*END OF REPORT\*\*\*\*\*