



# 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 ,Puxinhu Industrial Area, Tangxia , Dongguan, Guangdong, China.	
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<b>Accreditation:</b> The IAS Accreditation Number TL-460.	

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## 1 - General Information

### 1.1 Description of LED Light Sources

#### Sample Size:

60 PCS test samples were in good condition and received on 2019-04-28. The samples were numbered from 1 to 30 and 31 to 60.

#Manufacturer:	Hongli Zhihui Group Co.,Ltd. Guangzhou Branch
#Part Number:	HL-AS-2835IR2C-L1-08-PCT
#Part Type:	LED Package
#Drive Level:	DC 150mA
#Wavelength:	740nm
#Power:	0.36W
#Average Current Density per LED die:	600.000mA/mm <sup>2</sup>
#Average Power Density per LED die:	1.440W/mm <sup>2</sup>
#CRI:	NA
#Die Spacing:	NA

#### 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 *ENERGY STAR® Requirements for the Use of LM-80 Data*, the following products can be covered by this report base on the information and declaration provided by manufacturer. The information of these models shows that the covered products meet all section 4 requirements of *ENERGY STAR® Requirements for the Use of LM-80 Data* (September 28, 2017)

This report covers the following models:

Test Model Number	Multiple Models	Details
HL-AS-2835IR2C-L1-08-PCT	HL-A-2835IR**C-L1-08-PCT	1. Different Model name for different market. 2. "*" is a number from 1 to 99, which stand for the serial code.
	HL-A-2835IR**C-L1-08L-PCT	
	HL-AS-2835IR**C-L1-08-PCT	
	HL-AS-2835IR**C-L1-08L-PCT	
	HL-A-2835IR**C-L1-08	
	HL-A-2835IR**C-L1-08L	
	HL-A-2835IR**C-L1-08HL	

### 1.2 Standards and Reference Documentations

- ANSI/IES LM-80-15: IES Approved Method for Measuring Lumen Maintenance of LED Light Sources.
- CIE 127:2007: Measurement of LEDs
- ANSI/ASABE S640 JUL2017 Quantities and Units of Electromagnetic Radiation for Plants (Photosynthetic Organisms) (This standard was not accredited by IAS)
- ANSI/ASABE S642 SEP2018: Recommended Methods for Measurement and Testing of LED Products for Plant Growth and Development (This standard was not accredited by IAS)

### 1.3 Testing Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
0.5m integrating sphere	EVERFINE	AIS-2	G185304TA1381172	2019-10-22	2020-10-21
LED Test Source	EVERFINE	LTS-300	P185616CD1371113	2020-07-23	2021-07-22
High Accuracy Array Spectroradiometer	EVERFINE	HAAS-2000	P600674CM1381123	2019-10-22	2020-10-21
Standard Light Source	EVERFINE	D062	1011093	2019-11-19	2020-11-18
Multilayer aging machine	BACL	N/A	N/A	2019-11-05	2020-11-04
Program-controlled D.C. Stabilized Voltage Supply	Hanshenpuyuan	HSPY-60-03	N/A	2020-07-01	2021-06-30

### 1.4 Drive Level

Samples are driven with a constant direct current (DC) during maintenance test, photometric and electrical measurement. The current value was regulated to within  $\pm 3\%$  of the specified value of the manufacturer during maintenance test, and was within  $\pm 0.5\%$  during photometric and electrical measurement test.

### 1.5 Ambient Conditions for Maintenance Test

For lumen maintenance test, samples within one data set, were installed on cooling boards in thermal chambers with minimal ambient airflow. The case temperature and ambient temperature was monitored by thermocouples which one was soldered to the coldest DUTs' case (TMP<sub>LED</sub>) location, while the other is mounted at a distance of 5 mm above the TMP location.

During life testing, TMP<sub>LED</sub> of the coldest LEDs were maintained at a temperature that was greater than or equal to 2°C below the corresponding nominal case temperature. Surrounding air was maintained at a temperature that was greater than or equal to 5°C below the corresponding nominal case temperature. Thermocouples were shielded from direct DUT optical radiation and comply with ASTM E230 Table 1 "Special Limits".

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°C  $\pm$  2°C, RH <65%.

### 1.6 Photometric Measurement Method and Uncertainty

Integrating sphere and spectroradiometer is used to measure spectral power distribution and photon flux. 2 $\pi$  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°C  $\pm$  2°C, RH <65%. The temperature measurement point was located in the sphere and the temperature was detected by a temperature probe.

### 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).

## 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

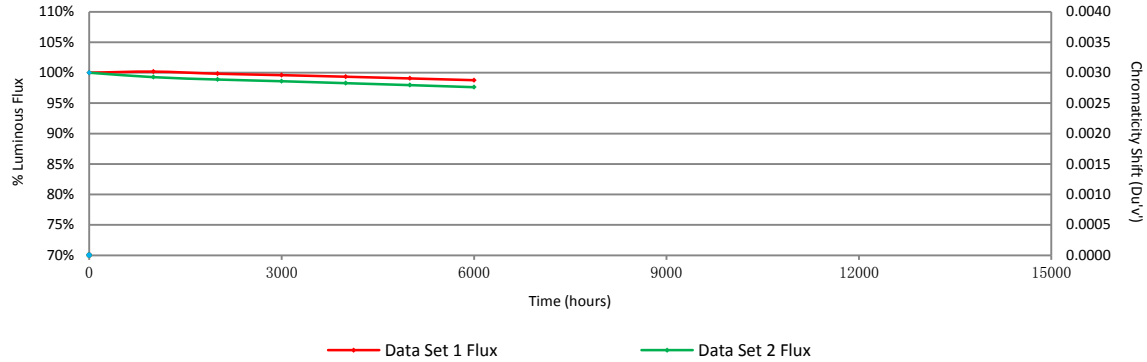
Part Number: HL-AS-2835IR2C-L1-08-PCT  
Number of Units: 30  
Case Temperature: >103°C  
Ambient Temperature: >100°C  
Life Test Drive Current: 150mA  
Measurement Current: 150mA

## 2 - Summary of Test Result

Data Set:	Sample Size	Failures Observed:	Test Interval	Test Duration	$\alpha$	$\beta$	Reported TM-21 Q <sub>70</sub> Lifetime	Reported TM-21 Q <sub>90</sub> Lifetime
1	30	0	1000hrs	6000hrs	2.763E-06	1.004	>36000 hours	>36000 hours
2	30	0	1000hrs	6000hrs	3.289E-06	0.996	>36000 hours	31000 hours

Average Photon Flux Maintenance, Far-Red 700-800nm (PFM<sub>FR</sub>) (Percentage of Initial)

Data Set:	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	100.18%	99.83%	99.60%	99.34%	99.06%	98.77%
2	99.27%	98.88%	98.60%	98.28%	97.96%	97.62%



### 3 - Test Data

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

No.	$\Phi_{p,fr} (\mu\text{mol} \times \text{s}^{-1})$	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



**3.3 Data Set 1, 85°C, 150mA (Wavelength)**

No.	Wavelength (nm)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
1	730.0	730.0	730.0	730.0	730.0	730.0	730.0
2	730.9	729.8	730.1	730.1	729.9	730.5	730.1
3	730.0	730.0	730.1	730.0	729.9	730.0	730.1
4	731.7	730.9	731.3	730.5	732.0	731.7	731.3
5	733.7	733.6	733.4	733.4	733.3	732.5	732.7
6	732.4	732.4	732.9	733.3	732.8	733.2	733.5
7	732.6	731.8	732.6	731.8	732.0	732.0	732.0
8	732.7	732.4	732.1	732.4	732.1	732.1	732.6
9	731.6	731.7	731.8	731.7	730.9	731.8	730.7
10	730.9	730.1	731.5	729.8	730.0	730.1	730.0
11	732.9	732.1	732.0	732.0	732.5	732.0	732.1
12	733.7	732.5	733.2	733.5	734.0	732.8	733.7
13	730.1	729.9	730.0	730.9	730.7	730.1	730.3
14	732.5	732.4	733.3	732.5	732.9	732.4	733.2
15	733.3	733.6	733.7	734.0	733.8	732.9	733.5
16	731.7	730.9	731.6	731.2	730.9	731.7	730.1
17	731.7	731.8	732.5	732.0	731.7	732.9	731.8
18	731.8	730.7	731.6	731.7	731.7	730.9	730.9
19	731.9	731.8	732.6	732.1	732.4	732.0	732.1
20	730.9	731.7	731.7	731.7	730.5	731.6	729.9
21	730.1	730.1	730.5	730.1	730.1	730.2	730.7
22	732.2	732.3	732.6	732.1	732.3	732.5	732.0
23	732.0	731.8	732.3	732.4	731.8	732.0	731.8
24	730.1	729.8	730.0	730.5	730.2	730.0	730.1
25	731.7	730.1	730.7	730.5	730.2	730.2	730.1
26	730.0	729.8	730.1	729.8	729.9	729.8	729.8
27	731.8	729.9	730.9	730.5	730.1	731.3	730.0
28	733.3	732.6	733.2	733.6	733.6	733.3	732.8
29	732.6	732.0	732.8	732.5	731.9	732.0	731.9
30	730.0	729.7	730.1	730.0	729.9	730.1	729.8
Avg.	731.7	731.3	731.7	731.6	731.5	731.5	731.3
Med.	731.8	731.7	731.8	731.7	731.7	731.8	731.1
st dev	1.2	1.2	1.2	1.3	1.3	1.1	1.3
Min.	730.0	729.7	730.0	729.8	729.9	729.8	729.8
Max.	733.7	733.6	733.7	734.0	734.0	733.3	733.7

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

No.	$\Phi_{p,fr}$ ( $\mu\text{mol} \times \text{s}^{-1}$ )	700-800nm Photon Flux Maintenance (%)					
		0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs
31	0.6900	98.58	98.26	97.97	97.65	97.39	96.99
32	0.6920	99.00	98.44	98.31	98.03	97.66	97.44
33	0.6868	99.48	99.18	98.94	98.69	98.22	97.90
34	0.6875	99.08	98.69	98.55	98.14	97.82	97.48
35	0.6949	99.45	99.06	98.82	98.56	98.20	97.94
36	0.6917	99.32	98.87	98.86	98.60	98.32	97.93
37	0.6926	99.03	98.60	98.09	97.76	97.44	97.07
38	0.6801	99.10	98.76	98.28	98.03	97.65	97.43
39	0.6981	99.03	98.68	98.42	98.11	97.78	97.45
40	0.6879	98.68	98.30	97.73	97.28	96.99	96.61
41	0.6872	99.29	98.78	98.24	97.83	97.50	97.15
42	0.6908	99.45	99.03	98.76	98.49	98.15	97.70
43	0.6874	99.11	98.78	98.76	98.40	98.08	97.75
44	0.6963	98.84	98.45	98.41	98.05	97.76	97.41
45	0.6907	99.48	99.12	99.04	98.71	98.35	98.03
46	0.6933	99.02	98.75	98.17	97.92	97.71	97.39
47	0.6954	99.35	99.07	98.84	98.45	98.12	97.67
48	0.6943	99.70	99.32	98.80	98.50	98.14	97.81
49	0.6851	98.76	98.31	98.12	97.81	97.58	97.26
50	0.6941	99.58	99.18	98.82	98.52	98.14	97.72
51	0.6853	98.41	98.03	97.96	97.53	97.30	96.98
52	0.6995	99.67	99.34	99.01	98.68	98.20	97.76
53	0.6913	100.04	99.59	99.35	99.13	98.84	98.48
51	0.6945	99.50	99.01	98.52	98.21	97.87	97.58
55	0.6938	99.32	98.93	98.82	98.53	98.26	97.90
56	0.6931	99.99	99.58	99.08	98.82	98.54	98.30
57	0.6847	99.62	99.28	99.09	98.86	98.50	98.15
58	0.6943	98.80	98.30	98.14	97.74	97.39	97.13
59	0.6935	99.52	99.22	98.85	98.70	98.40	98.01
60	0.6919	99.86	99.49	99.16	98.76	98.47	98.05
Avg.	0.6913	99.27	98.88	98.60	98.28	97.96	97.62
Med.	0.6920	99.32	98.90	98.76	98.42	98.10	97.68
st dev	0.0044	0.41	0.42	0.42	0.45	0.44	0.43
Min.	0.6801	98.41	98.03	97.73	97.28	96.99	96.61
Max.	0.6995	100.04	99.59	99.35	99.13	98.84	98.48

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

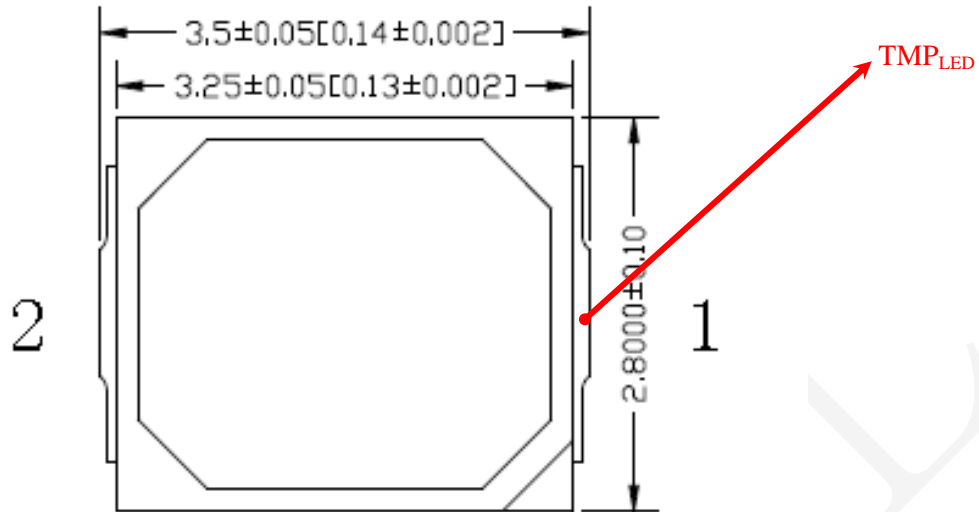
No.	Forward Voltage (V)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
31	2.118	2.161	2.135	2.127	2.140	2.140	2.145
32	2.106	2.148	2.124	2.113	2.130	2.127	2.129
33	2.114	2.153	2.132	2.118	2.135	2.132	2.134
34	2.119	2.157	2.134	2.123	2.138	2.136	2.136
35	2.133	2.170	2.145	2.134	2.149	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
53	2.144	2.178	2.169	2.150	2.165	2.162	2.171
51	2.139	2.173	2.160	2.145	2.161	2.158	2.163
55	2.153	2.186	2.173	2.158	2.173	2.174	2.174
56	2.103	2.136	2.126	2.108	2.123	2.120	2.127
57	2.119	2.155	2.140	2.125	2.139	2.136	2.144
58	2.153	2.188	2.175	2.158	2.169	2.168	2.178
59	2.131	2.167	2.153	2.136	2.146	2.150	2.153
60	2.128	2.162	2.146	2.133	2.145	2.144	2.150
Avg.	2.126	2.163	2.146	2.132	2.148	2.147	2.152
Med.	2.122	2.164	2.146	2.134	2.146	2.147	2.152
st dev	0.018	0.018	0.020	0.018	0.018	0.019	0.019
Min.	2.098	2.128	2.108	2.101	2.119	2.111	2.116
Max.	2.155	2.189	2.178	2.158	2.173	2.174	2.182

**3.6 Data Set 2, 105°C, 150mA (Wavelength)**

No.	Wavelength (nm)						
	0hr(Initial)	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
31	730.7	730.1	730.2	731.8	731.7	731.6	730.9
32	732.8	732.1	731.7	732.5	731.8	732.0	732.0
33	730.1	729.8	730.0	730.5	730.0	730.1	730.0
34	731.7	730.5	731.7	730.9	730.9	731.5	731.5
35	732.5	732.0	732.5	732.5	732.4	732.5	731.7
36	733.8	732.5	732.1	732.9	732.1	732.0	732.4
37	733.7	731.9	733.8	734.0	732.6	733.2	732.6
38	729.8	728.9	729.9	729.1	729.4	729.6	730.0
39	733.2	731.8	732.6	732.0	732.0	732.4	732.0
40	729.9	728.8	729.9	730.9	729.9	730.1	729.7
41	731.7	731.3	731.7	731.7	730.5	730.9	731.7
42	732.7	732.4	732.6	733.4	732.0	733.6	732.7
43	730.0	729.8	729.4	730.0	729.4	729.7	730.0
44	731.6	730.9	730.9	732.0	730.5	730.9	730.1
45	732.1	731.7	731.8	731.8	732.0	732.0	731.8
46	732.5	731.8	732.0	732.4	732.5	732.3	732.0
47	732.8	732.4	732.2	732.5	733.2	732.6	732.0
48	731.7	732.4	732.4	732.8	732.6	732.2	732.0
49	731.7	730.5	730.1	731.7	731.7	731.7	731.5
50	732.7	731.7	732.4	733.6	732.0	732.6	732.5
51	730.9	732.9	733.2	733.6	732.8	733.7	733.7
52	729.9	729.4	729.7	730.1	730.0	730.1	730.0
53	732.2	731.7	731.7	732.1	732.0	732.7	732.0
54	732.2	732.3	732.2	732.8	732.5	732.0	732.0
55	733.6	732.2	732.0	732.8	733.6	732.5	733.2
56	730.0	730.0	730.1	730.1	729.9	730.1	729.7
57	731.5	730.2	730.1	730.9	730.3	731.6	730.9
58	733.3	732.0	732.0	732.1	733.2	731.8	732.5
59	732.8	732.0	732.5	732.5	732.4	732.4	732.0
60	732.4	731.7	732.8	732.8	732.9	732.0	732.1
Avg.	731.9	731.3	731.5	732.0	731.6	731.7	731.6
Med.	732.2	731.7	731.9	732.1	732.0	732.0	732.0
st dev	1.2	1.2	1.2	1.2	1.2	1.1	1.1
Min.	729.8	728.8	729.4	729.1	729.4	729.6	729.7
Max.	733.8	732.9	733.8	734.0	733.6	733.7	733.7

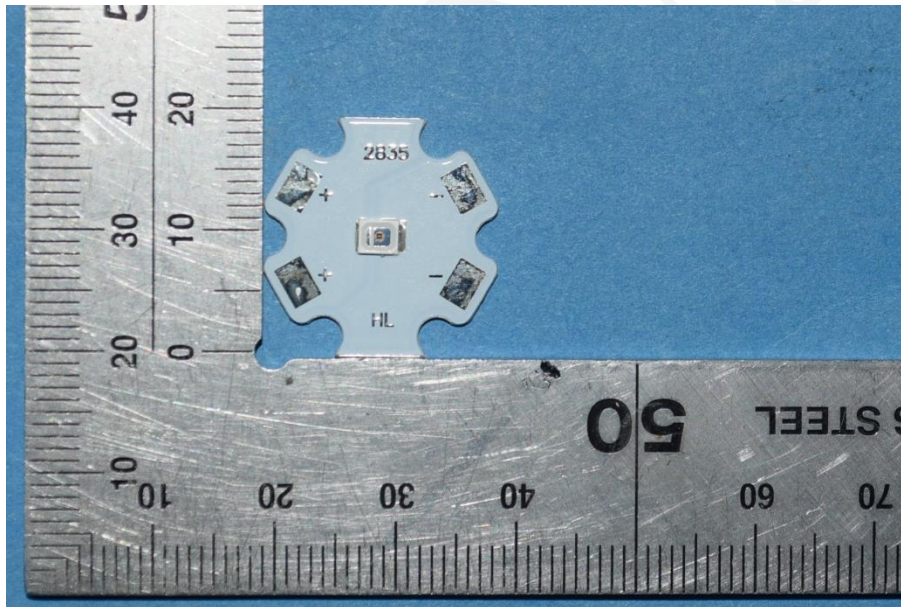
#### 4 - DUT Photo

##### 4.1 #Mechanical Dimensions



All dimensions are in millimeter

##### 4.2 DUT Photo



## Directions

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1. The information marked "superscript #" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
2. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
3. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.
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\*\*\*\*\*END OF REPORT\*\*\*\*\*