Delta Electronics, Inc.
252 Shangying Road, Guishan Industrial Zone,
Taoyuan County 33341, Taiwan, R.O.C.
TEL : +886-3-359-1968

TEST REPORT

SAMPLE INFORMATION:

1. **Sample Description:** LED Street Light
2. **Trade Mark:**
3. **Models:** ARIALED 180
4. **Serial/Batch No. of Sample:** ---
5. **Manufacturer Date:** ----
6. **Manufacturer:** OrangeTek Limited
7. **Manufacturer Address:** Coach House, Blakenhall Park, Bar Lane, Barton under Needwood, Burton upon Trent DE138AJ
8. **Sample Quantity:** 5 units ARIALED 180

CLIENT INFORMATION

1. **Applicant:** OrangeTek Limited
2. **Applicant Address:** Coach House Blakenhall Park, Bar Lane, Barton under Needwood, Burton upon Trent DE13 8AJ
3. **Applicant Post Code:** ---
4. **Applicant Telephone:** ---+44 (0)128 371 6690

TEST INFORMATION:

1. **Applicant No:**
2. **Sampling Method:** Delivered by Applicant
3. **Date of Receipt:** 2014-04-9
4. **Issued Date:** 2014-04-12
5. **Test Item:** Input characteristic
6. **Ref. Documents for the Test:** Specified by client.

CONCLUSION:

REMARKS:

1. The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.
2. Characterization & Condition of Sample: Normal.
3. Ambient Condition During Testing: 25 ± 2 C, 50-60% RH.

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Sample 1 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	152.34	0.7345	0.985
220	50	152.28	0.7024	0.983
230	50	152.25	0.6733	0.980
240	50	152.27	0.6474	0.977
250	50	152.28	0.6234	0.974

Sample 2 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	152.37	0.7348	0.986
220	50	152.31	0.7027	0.983
230	50	152.28	0.6736	0.981
240	50	152.29	0.6477	0.977
250	50	152.31	0.6237	0.975

Sample 3 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	152.35	0.7346	0.985
220	50	152.28	0.7024	0.983
230	50	152.25	0.6733	0.980
240	50	152.28	0.6475	0.977
250	50	152.28	0.6234	0.974

Sample 4 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	152.35	0.7346	0.985
220	50	152.29	0.7025	0.983
230	50	152.26	0.6734	0.980
240	50	152.28	0.6475	0.977
250	50	152.29	0.6235	0.974

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Sample 5 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	152.36	0.7347	0.986
220	50	152.29	0.7026	0.983
230	50	152.27	0.6735	0.981
240	50	152.29	0.6476	0.977
250	50	152.29	0.6236	0.975

Watts 100% light output

Voltage \ Sample	1	2	3	4	5
210	152.34	152.37	152.35	152.35	152.36
220	152.28	152.31	152.28	152.29	152.29
230	152.25	152.28	152.25	152.26	152.27
240	152.27	152.29	152.28	152.28	152.29
250	152.28	152.31	152.28	152.29	152.29

VA 100% light output

Voltage \ Sample	1	2	3	4	5
210	154.245	154.308	154.266	154.266	154.287
220	154.528	154.594	154.528	154.550	154.572
230	154.859	154.928	154.859	154.882	154.905
240	155.376	155.448	155.400	155.400	155.424
250	155.850	155.925	155.850	155.875	155.900

Notes:

1. Test be conducted after operating for 12 hours to reach their steady load state.
2. The measurement uncertainties are for a confidence probability of not less than 98%.
3. The measurement uncertainties of the below value (k=2), Urel(v)=0.1% , Urel(w)=0.1% , Urel(i)=0.2% , Urel(f)=0.05% , Urel(PF)=0.5

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Sample 1 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	104.63	0.5094	0.975
220	50	104.62	0.4883	0.971
230	50	104.68	0.4688	0.967
240	50	104.78	0.4523	0.963
250	50	104.92	0.4374	0.958

Sample 2 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	104.66	0.5097	0.976
220	50	104.65	0.4886	0.971
230	50	104.71	0.4691	0.968
240	50	104.81	0.4526	0.963
250	50	104.95	0.4377	0.959

Sample 3 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	104.64	0.5094	0.975
220	50	104.62	0.4883	0.971
230	50	104.69	0.4689	0.967
240	50	104.78	0.4523	0.963
250	50	104.92	0.4375	0.958

Sample 4 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	104.64	0.5095	0.975
220	50	104.63	0.4884	0.972
230	50	104.69	0.4689	0.967
240	50	104.79	0.4524	0.963
250	50	104.93	0.4375	0.958

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Sample 5 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	104.65	0.5096	0.976
220	50	104.64	0.4885	0.972
230	50	104.69	0.4689	0.967
240	50	104.79	0.4525	0.963
250	50	104.94	0.4376	0.958

Watts 70% light output

Voltage \ Sample	1	2	3	4	5
210	104.63	104.66	104.64	104.64	104.65
220	104.62	104.65	104.62	104.63	104.64
230	104.68	104.71	104.69	104.69	104.69
240	104.78	104.81	104.78	104.79	104.79
250	104.92	104.95	104.92	104.93	104.94

VA 70% light output

Voltage \ Sample	1	2	3	4	5
210	106.974	107.037	106.974	106.995	107.016
220	107.426	107.492	107.426	107.448	107.470
230	107.824	107.893	107.847	107.847	107.847
240	108.552	108.624	108.552	108.576	108.600
250	109.350	109.425	109.375	109.375	109.400

Notes:

4. Test be conducted after operating for 12 hours to reach their steady load state.
5. The measurement uncertainties are for a confidence probability of not less than 98%.
6. The measurement uncertainties of the below value (k=2), Urel(v)=0.1% , Urel(w)=0.1% , Urel(i)=0.2% , Urel(f)=0.05% , Urel(PF)=0.5

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Sample 1 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	77.54	0.3822	0.962
220	50	77.56	0.3673	0.957
230	50	77.58	0.3538	0.951
240	50	77.68	0.3425	0.945
250	50	77.92	0.3313	0.939

Sample 2 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	77.57	0.3825	0.963
220	50	77.59	0.3678	0.957
230	50	77.61	0.3541	0.952
240	50	77.71	0.3428	0.945
250	50	77.95	0.3316	0.940

Sample 3 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	77.55	0.3823	0.962
220	50	77.56	0.3673	0.957
230	50	77.58	0.3538	0.951
240	50	77.69	0.3426	0.945
250	50	77.92	0.3313	0.939

Sample 4 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	77.55	0.3823	0.962
220	50	77.57	0.3674	0.957
230	50	77.59	0.3539	0.951
240	50	77.69	0.3426	0.945
250	50	77.93	0.3314	0.939

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Sample 5 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	77.56	0.3824	0.963
220	50	77.58	0.3675	0.957
230	50	77.59	0.3539	0.951
240	50	77.69	0.3427	0.945
250	50	77.94	0.3315	0.934

Watts 50% light output

Voltage \ Sample	1	2	3	4	5
210	77.54	77.57	77.55	77.55	77.56
220	77.56	77.59	77.56	77.57	77.58
230	77.58	77.61	77.58	77.59	77.59
240	77.68	77.71	77.69	77.69	77.69
250	77.92	77.95	77.92	77.93	77.94

VA 50% light output

Voltage \ Sample	1	2	3	4	5
210	80.262	80.325	80.283	80.283	80.304
220	80.806	80.916	80.806	80.828	80.850
230	81.374	81.443	81.374	81.397	81.397
240	82.200	82.272	82.224	82.224	82.248
250	82.825	82.900	82.825	82.850	82.875

Notes:

7. Test be conducted after operating for 12 hours to reach their steady load state.
8. The measurement uncertainties are for a confidence probability of not less than 98%.
9. The measurement uncertainties of the below value (k=2), Urel(v)=0.1% , Urel(w)=0.1% , Urel(i)=0.2% , Urel(f)=0.05% , Urel(PF)=0.5

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Photograph of Sample

Photo 1View of EUT

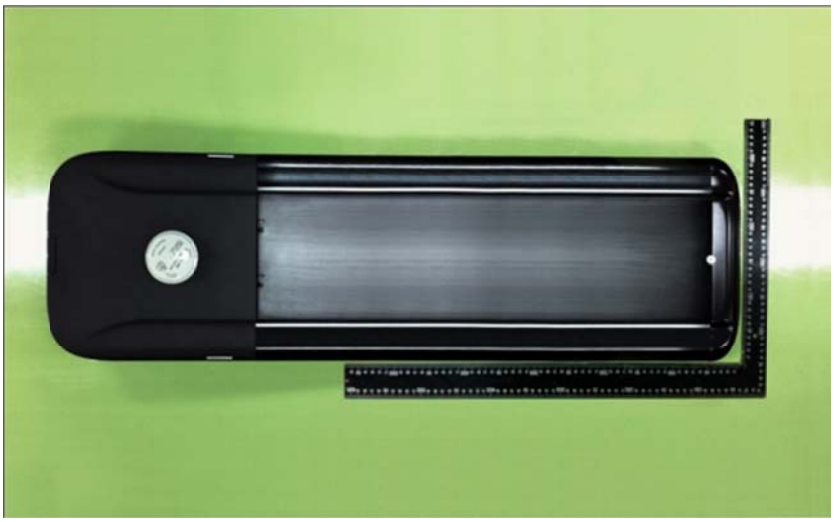

Photo 2 View of EUT