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 170
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 170

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	152.36	0.7345	0.984
220	50	152.25	0.7024	0.983
230	50	152.16	0.6734	0.981
240	50	152.14	0.6473	0.977
250	50	152.12	0.6232	0.974

Sample 2 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	152.39	0.7348	0.985
220	50	152.28	0.7027	0.984
230	50	152.19	0.6737	0.981
240	50	152.17	0.6476	0.978
250	50	152.15	0.6235	0.975

Sample 3 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	152.36	0.7345	0.984
220	50	152.26	0.7024	0.983
230	50	152.16	0.6734	0.981
240	50	152.14	0.6473	0.977
250	50	152.13	0.6232	0.974

Sample 4 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	152.37	0.7346	0.984
220	50	152.26	0.7025	0.983
230	50	152.17	0.6735	0.981
240	50	152.15	0.6474	0.977
250	50	152.14	0.6234	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	152.38	0.7347	0.985
220	50	152.28	0.7026	0.983
230	50	152.18	0.6736	0.981
240	50	152.16	0.6475	0.977
250	50	152.14	0.6235	0.975

Watts 100% light output

Voltage \ Sample	1	2	3	4	5
210	152.36	152.39	152.36	152.37	152.38
220	152.25	152.28	152.26	152.26	152.28
230	152.16	152.19	152.16	152.17	152.18
240	152.14	152.17	152.14	152.15	152.16
250	152.12	152.15	152.13	152.14	152.14

VA 100% light output

Voltage \ Sample	1	2	3	4	5
210	154.245	154.308	154.245	154.266	154.287
220	154.528	154.594	154.528	154.550	154.572
230	154.882	154.951	154.882	154.905	154.928
240	155.352	155.424	155.352	155.376	155.400
250	155.800	155.875	155.800	155.850	155.875

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	105.44	0.5135	0.975
220	50	105.47	0.4923	0.972
230	50	105.51	0.4733	0.967
240	50	105.56	0.4554	0.963
250	50	105.63	0.4403	0.958

Sample 2 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	105.47	0.5138	0.976
220	50	105.49	0.4926	0.973
230	50	105.54	0.4736	0.967
240	50	105.59	0.4555	0.963
250	50	105.66	0.4405	0.959

Sample 3 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	105.45	0.5135	0.975
220	50	105.47	0.4923	0.972
230	50	105.52	0.4733	0.967
240	50	105.56	0.4554	0.963
250	50	105.64	0.4403	0.958

Sample 4 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	105.45	0.5136	0.975
220	50	105.48	0.4924	0.972
230	50	105.52	0.4734	0.967
240	50	105.57	0.4555	0.963
250	50	105.64	0.4404	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	105.46	0.5137	0.975
220	50	105.48	0.4925	0.973
230	50	105.53	0.4735	0.967
240	50	105.58	0.4556	0.963
250	50	105.65	0.4405	0.959

Watts 70% light output

Voltage \ Sample	1	2	3	4	5
210	105.44	105.47	105.45	105.45	105.46
220	105.47	105.49	105.47	105.48	105.48
230	105.51	105.54	105.52	105.52	105.53
240	105.56	105.59	105.56	105.57	105.58
250	105.63	105.66	105.64	105.64	105.65

VA 70% light output

Voltage \ Sample	1	2	3	4	5
210	107.835	107.898	107.835	107.856	107.877
220	108.306	108.372	108.306	108.328	108.350
230	108.859	108.928	108.859	108.882	108.905
240	109.296	109.320	109.296	109.320	109.344
250	110.075	110.125	110.075	110.100	110.125

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	74.95	0.3706	0.961
220	50	75.06	0.3566	0.955
230	50	75.15	0.3437	0.949
240	50	75.33	0.3325	0.943
250	50	75.45	0.3215	0.936

Sample 2 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	74.98	0.3709	0.962
220	50	75.09	0.3569	0.955
230	50	75.18	0.3439	0.949
240	50	75.36	0.3328	0.943
250	50	75.48	0.3218	0.937

Sample 3 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	74.95	0.3706	0.961
220	50	75.05	0.3566	0.955
230	50	75.16	0.3437	0.949
240	50	75.33	0.3325	0.943
250	50	75.45	0.3215	0.936

Sample 4 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	74.96	0.3706	0.961
220	50	75.07	0.3566	0.955
230	50	75.16	0.3437	0.949
240	50	75.34	0.3325	0.943
250	50	75.45	0.3215	0.936

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Sample 5 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	74.97	0.3708	0.962
220	50	75.08	0.3568	0.956
230	50	75.17	0.3439	0.949
240	50	75.35	0.3327	0.943
250	50	75.47	0.3216	0.937

Watts 50% light output

Voltage \ Sample	1	2	3	4	5
210	74.95	74.98	74.95	74.96	74.97
220	75.06	75.09	75.05	75.07	75.08
230	75.15	75.18	75.16	75.16	75.17
240	75.33	75.36	75.33	75.34	75.35
250	75.45	75.48	75.45	75.45	75.47

VA 50% light output

Voltage \ Sample	1	2	3	4	5
210	77.826	77.889	77.826	77.826	77.868
220	78.452	78.518	78.452	78.452	78.496
230	79.051	79.097	79.051	79.051	79.097
240	79.800	79.872	79.800	79.800	79.848
250	80.375	80.450	80.375	80.375	80.400

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