Delta Electronics, Inc.
3 Tungyuan Road, Chungli Industrial Zone,
Taoyuan County 32063, Taiwan, R.O.C.
TEL : +886-3-452-6107

TEST REPORT

SAMPLE INFORMATION:

1. **Sample Description:** LED Street Light
2. **Trade Mark:**
3. **Models:** ARIALED S20
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 S20

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:** 2016-01-19
4. **Issued Date:** 2016-01-19
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	46.00	0.2277	0.959
220	50	46.00	0.2188	0.953
230	50	46.10	0.2108	0.947
240	50	46.10	0.2037	0.940
250	50	46.10	0.1974	0.932

Sample 2 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	46.03	0.2278	0.959
220	50	46.03	0.2189	0.953
230	50	46.13	0.2109	0.947
240	50	46.13	0.2038	0.940
250	50	46.13	0.1975	0.932

Sample 3 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	45.97	0.2276	0.959
220	50	45.97	0.2187	0.953
230	50	46.07	0.2107	0.947
240	50	46.07	0.2036	0.940
250	50	46.07	0.1973	0.932

Sample 4 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	46.06	0.2280	0.959
220	50	46.06	0.2191	0.953
230	50	46.16	0.2111	0.947
240	50	46.16	0.2039	0.940
250	50	46.16	0.1976	0.932

Sample 5 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	45.94	0.2274	0.959
220	50	45.94	0.2185	0.953
230	50	46.04	0.2105	0.947
240	50	46.04	0.2035	0.940
250	50	46.04	0.1972	0.932

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Watts 100% light output

Voltage\Sample	1	2	3	4	5
210	46.00	46.03	45.97	46.06	45.94
220	46.00	46.03	45.97	46.06	45.94
230	46.10	46.13	46.07	46.16	46.04
240	46.10	46.13	46.07	46.16	46.04
250	46.10	46.13	46.07	46.16	46.04

VA 100% light output

Voltage\Sample	1	2	3	4	5
210	47.817	47.846	47.788	47.874	47.760
220	48.136	48.165	48.107	48.194	48.078
230	48.484	48.513	48.455	48.542	48.426
240	48.888	48.917	48.859	48.947	48.829
250	49.350	49.380	49.320	49.409	49.291

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	32.61	0.1663	0.931
220	50	32.67	0.1607	0.921
230	50	32.74	0.1558	0.911
240	50	32.82	0.1503	0.909
250	50	32.91	0.1478	0.887

Sample 2 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	32.63	0.1664	0.931
220	50	32.69	0.1608	0.921
230	50	32.76	0.1559	0.911
240	50	32.84	0.1504	0.909
250	50	32.93	0.1479	0.887

Sample 3 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	32.59	0.1662	0.931
220	50	32.65	0.1606	0.921
230	50	32.72	0.1557	0.911
240	50	32.80	0.1502	0.909
250	50	32.89	0.1477	0.887

Sample 4 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	32.65	0.1665	0.931
220	50	32.71	0.1609	0.921
230	50	32.78	0.1560	0.911
240	50	32.86	0.1505	0.909
250	50	32.95	0.1480	0.887

Sample 5 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	32.57	0.1661	0.931
220	50	32.63	0.1605	0.921
230	50	32.70	0.1556	0.911
240	50	32.78	0.1501	0.909
250	50	32.87	0.1476	0.887

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Watts 70% light output

Voltage\Sample	1	2	3	4	5
210	32.61	32.63	32.59	32.65	32.57
220	32.67	32.69	32.65	32.71	32.63
230	32.74	32.76	32.72	32.78	32.70
240	32.82	32.84	32.80	32.86	32.78
250	32.91	32.93	32.89	32.95	32.87

VA 70% light output

Voltage\Sample	1	2	3	4	5
210	34.923	34.944	34.902	34.965	34.881
220	35.354	35.375	35.333	35.396	35.312
230	35.834	35.856	35.812	35.877	35.791
240	36.072	36.094	36.050	36.115	36.029
250	36.950	36.972	36.928	36.994	36.906

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	23.88	0.1273	0.890
220	50	23.96	0.1240	0.875
230	50	24.05	0.1212	0.860
240	50	24.14	0.1189	0.844
250	50	24.24	0.1170	0.825

Sample 2 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	23.89	0.1274	0.890
220	50	23.97	0.1241	0.875
230	50	24.06	0.1213	0.860
240	50	24.15	0.1190	0.844
250	50	24.25	0.1171	0.825

Sample 3 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	23.87	0.1272	0.890
220	50	23.95	0.1239	0.875
230	50	24.04	0.1211	0.860
240	50	24.13	0.1188	0.844
250	50	24.23	0.1169	0.825

Sample 4 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	23.91	0.1275	0.890
220	50	23.99	0.1241	0.875
230	50	24.08	0.1213	0.860
240	50	24.17	0.1190	0.844
250	50	24.27	0.1171	0.825

Sample 5 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	23.85	0.1271	0.890
220	50	23.93	0.1239	0.875
230	50	24.02	0.1211	0.860
240	50	24.11	0.1188	0.844
250	50	24.21	0.1169	0.825

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Watts 50% light output

Voltage\Sample	1	2	3	4	5
210	23.88	23.89	23.87	23.91	23.85
220	23.96	23.97	23.95	23.99	23.93
230	24.05	24.06	24.04	24.08	24.02
240	24.14	24.15	24.13	24.17	24.11
250	24.24	24.25	24.23	24.27	24.21

VA 50% light output

Voltage\Sample	1	2	3	4	5
210	26.733	26.749	26.717	26.765	26.701
220	27.280	27.296	27.264	27.313	27.247
230	27.876	27.893	27.859	27.909	27.843
240	28.536	28.553	28.519	28.570	28.502
250	29.250	29.268	29.232	29.285	29.215

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