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	45.60	0.2258	0.958
220	50	45.60	0.2170	0.953
230	50	45.60	0.2091	0.946
240	50	45.70	0.2022	0.939
250	50	45.70	0.1959	0.931

Sample 2 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	45.63	0.2259	0.958
220	50	45.63	0.2171	0.953
230	50	45.63	0.2092	0.946
240	50	45.73	0.2023	0.939
250	50	45.73	0.1960	0.931

Sample 3 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	45.57	0.2257	0.958
220	50	45.57	0.2169	0.953
230	50	45.57	0.2090	0.946
240	50	45.67	0.2021	0.939
250	50	45.67	0.1958	0.931

Sample 4 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	45.65	0.2261	0.958
220	50	45.65	0.2173	0.953
230	50	45.65	0.2094	0.946
240	50	45.75	0.2024	0.939
250	50	45.75	0.1961	0.931

Sample 5 100% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	45.55	0.2255	0.958
220	50	45.55	0.2167	0.953
230	50	45.55	0.2088	0.946
240	50	45.65	0.2020	0.939
250	50	45.65	0.1957	0.931

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Watts 100% light output

Voltage\Sample	1	2	3	4	5
210	45.60	45.63	45.57	45.65	45.55
220	45.60	45.63	45.57	45.65	45.55
230	45.60	45.63	45.57	45.65	45.55
240	45.70	45.73	45.67	45.75	45.65
250	45.70	45.73	45.67	45.75	45.65

VA 100% light output

Voltage\Sample	1	2	3	4	5
210	47.418	47.446	47.390	47.475	47.361
220	47.740	47.769	47.711	47.797	47.683
230	48.093	48.122	48.064	48.151	48.035
240	48.528	48.557	48.499	48.586	48.470
250	48.975	49.004	48.946	49.034	48.916

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	32.38	0.1653	0.930
220	50	32.45	0.1597	0.921
230	50	32.52	0.1549	0.910
240	50	32.60	0.1507	0.899
250	50	32.68	0.1470	0.886

Sample 2 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	32.40	0.1654	0.930
220	50	32.47	0.1598	0.921
230	50	32.54	0.1550	0.910
240	50	32.62	0.1508	0.899
250	50	32.70	0.1471	0.886

Sample 3 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	32.36	0.1652	0.930
220	50	32.43	0.1596	0.921
230	50	32.50	0.1548	0.910
240	50	32.58	0.1506	0.899
250	50	32.66	0.1469	0.886

Sample 4 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	32.42	0.1655	0.930
220	50	32.49	0.1599	0.921
230	50	32.56	0.1551	0.910
240	50	32.64	0.1509	0.899
250	50	32.72	0.1472	0.886

Sample 5 70% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	32.34	0.1651	0.930
220	50	32.41	0.1595	0.921
230	50	32.48	0.1547	0.910
240	50	32.56	0.1505	0.899
250	50	32.64	0.1468	0.886

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Watts 70% light output

Voltage\Sample	1	2	3	4	5
210	32.38	32.40	32.36	32.42	32.34
220	32.45	32.47	32.43	32.49	32.41
230	32.52	32.54	32.50	32.56	32.48
240	32.60	32.62	32.58	32.64	32.56
250	32.68	32.70	32.66	32.72	32.64

VA 70% light output

Voltage\Sample	1	2	3	4	5
210	34.713	34.734	34.692	34.755	34.671
220	35.134	35.155	35.113	35.176	35.092
230	35.627	35.648	35.606	35.670	35.584
240	36.168	36.190	36.146	36.211	36.125
250	36.750	36.772	36.728	36.794	36.706

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	23.90	0.1275	0.890
220	50	23.98	0.1241	0.876
230	50	24.06	0.1212	0.860
240	50	24.14	0.1189	0.844
250	50	24.23	0.1170	0.826

Sample 2 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	23.91	0.1276	0.890
220	50	23.99	0.1242	0.876
230	50	24.07	0.1213	0.860
240	50	24.15	0.1190	0.844
250	50	24.24	0.1171	0.826

Sample 3 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	0.1240	0.876
230	50	24.05	0.1211	0.860
240	50	24.13	0.1188	0.844
250	50	24.22	0.1169	0.826

Sample 4 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	23.93	0.1277	0.890
220	50	24.01	0.1242	0.876
230	50	24.09	0.1213	0.860
240	50	24.17	0.1190	0.844
250	50	24.26	0.1171	0.826

Sample 5 50% light output

Input voltage(V)	Frequency(Hz)	Input power(W)	Input current(A)	Power factor
210	50	23.87	0.1273	0.890
220	50	23.95	0.1240	0.876
230	50	24.03	0.1211	0.860
240	50	24.11	0.1188	0.844
250	50	24.20	0.1169	0.826

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Watts 50% light output

Voltage\Sample	1	2	3	4	5
210	23.90	23.91	23.89	23.93	23.87
220	23.98	23.99	23.97	24.01	23.95
230	24.06	24.07	24.05	24.09	24.03
240	24.14	24.15	24.13	24.17	24.11
250	24.23	24.24	24.22	24.26	24.20

VA 50% light output

Voltage\Sample	1	2	3	4	5
210	26.775	26.791	26.759	26.807	26.743
220	27.302	27.318	27.286	27.335	27.269
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