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Technical Report No. 611401713101

Rev. 00

Dated 2017-11-07

Client: LITE-ON TECHNOLOGY CORPORATION
No. 50, Lungyuan 7th Road, Longtan, Taoyuan, Taiwan

Test subject: Product: LED Street Light
Type: PAQ-08L-EV-NW-W3-WH-350

Test specification: Measurement of power consumption in accordance with the „Unmetered Operational Information Document – Version 17.0“

Purpose of examination: Test according to the test specification

Test result: The test results show that the presented product is in compliance with the specified requirements.

TPS_GCNI_F_09.20E – Rev. 1
2012-10-29

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1 Description of the test subject

1.1 Function

Class I LED street light.

1.2 Consideration of the foreseeable misuse

- ☒ Not applicable
- ☐ Covered through the applied standard
- ☐ Covered by the following comment
- ☐ Covered by attached risk analysis

1.3 Technical Data

Model	: PAQ-08L-EV-NW-W3-WH-350
Rated Voltage	: 220-240 Vac
Rated Frequency	: 50/60 Hz
Rated Power	: 10 W
Protection Class	: I
Nominal Dimension	: 420 mm x 210 mm x 95 mm
Lamp type	: LED module
Sample size	: 5 pcs

2 Order

2.1 Date of Purchase Order, Customer's Reference

2017-10-17

2.2 Receipt of Test Sample, Location

2017-10-17, TÜV SÜD Asia Ltd. Taiwan Branch



2.3 Date of Testing

2017-11-01 to 2017-11-02

2.4 Location of Testing

TÜV SÜD Asia Ltd. Taiwan Branch
7F., No. 37, Sec. 2, Zhongyang S., Rd., Beitou District, Taipei City, 11270, Taiwan

2.5 Points of Non-compliance or Exceptions of the Test Procedure

None

3 Test Results

See appendix – Test result for details.

4 Remark

- The measurements are conducted after operating for 2 hours to reach their steady load state.
- The customer has declared that the equipment load does not vary with ambient temperature, the testing was conducted at room temperature.
- The customer has declared that the power factor is lagging.
- The LED driver is Philips Xitanium programmable model, tests were performed by using integrated DynaDimmer to perform 100%, 80%, 70%, 60%, 50% dimming powers.
- The measurement uncertainties are for a confidence probability of not less than 95%.
- The measurement uncertainties of the below value (k=2). Urel(v)=0.31%; Urel(i)=1.03%; Urel(w)=1.12%; Urel(f)=0.06%.



5 Documentation

- Appendix - Test Result
- Appendix - Photo documentation

6 Summary

Few measured power factors are less than 0.85 under the operation mode: 100% power level.

TÜV SÜD Asia Ltd. Taiwan Branch
TÜV SÜD Group

Engineer:

Vincent Yen
Project Handler

Technical Report checked:

Alan Yuan
Designated Reviewer



Appendix – Test result (Operation mode: 100% power level)

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	volt-ampere (VA)	Power Factor
Sample 1					
210.0	50.0	0.0529	9.93	11.12	0.8934
220.0	50.0	0.0512	9.94	11.25	0.8827
230.0	50.0	0.0495	9.94	11.39	0.8731
240.0	50.0	0.0482	9.95	11.56	0.8602
250.0	50.0	0.0471	9.95	11.76	0.8461
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 2					
210.0	50.0	0.0528	9.92	11.10	0.8940
220.0	50.0	0.0512	9.92	11.26	0.8814
230.0	50.0	0.0497	9.93	11.44	0.8678
240.0	50.0	0.0484	9.93	11.60	0.8550
250.0	50.0	0.0470	9.94	11.74	0.8467
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 3					
210.0	50.0	0.0529	9.89	11.11	0.8906
220.0	50.0	0.0512	9.90	11.27	0.8779
230.0	50.0	0.0496	9.90	11.41	0.8676
240.0	50.0	0.0482	9.90	11.57	0.8564
250.0	50.0	0.0471	9.91	11.77	0.8424
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 4					
210.0	50.0	0.0529	9.93	11.12	0.8930
220.0	50.0	0.0512	9.93	11.27	0.8815
230.0	50.0	0.0498	9.94	11.44	0.8682
240.0	50.0	0.0484	9.94	11.61	0.8564
250.0	50.0	0.0471	9.95	11.77	0.8454
Ambient: 23.0°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 5					
210.0	50.0	0.0534	9.92	11.22	0.8838
220.0	50.0	0.0519	9.93	11.38	0.8728
230.0	50.0	0.0500	9.93	11.51	0.8634
240.0	50.0	0.0487	9.94	11.69	0.8497
250.0	50.0	0.0477	9.94	11.93	0.8333
Ambient: 23.0°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		



Appendix – Test result (Operation mode: 80% power level)

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	volt-ampere (VA)	Power Factor
Sample 1					
210.0	50.0	0.0447	7.92	9.38	0.8437
220.0	50.0	0.0434	7.92	9.54	0.8302
230.0	50.0	0.0422	7.93	9.69	0.8183
240.0	50.0	0.0413	7.94	9.90	0.8020
250.0	50.0	0.0406	7.95	10.13	0.7846
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 2					
210.0	50.0	0.0445	7.88	9.34	0.8432
220.0	50.0	0.0433	7.89	9.52	0.8291
230.0	50.0	0.0424	7.90	9.74	0.8110
240.0	50.0	0.0415	7.91	9.96	0.7938
250.0	50.0	0.0405	7.93	10.12	0.7826
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 3					
210.0	50.0	0.0444	7.84	9.32	0.8413
220.0	50.0	0.0433	7.85	9.52	0.8245
230.0	50.0	0.0421	7.86	9.67	0.8127
240.0	50.0	0.0412	7.88	9.88	0.7975
250.0	50.0	0.0404	7.89	10.12	0.7795
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 4					
210.0	50.0	0.0444	7.89	9.32	0.8464
220.0	50.0	0.0432	7.90	9.50	0.8311
230.0	50.0	0.0422	7.91	9.72	0.8132
240.0	50.0	0.0412	7.92	9.90	0.8000
250.0	50.0	0.0403	7.93	10.09	0.7853
Ambient: 23.0°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 5					
210.0	50.0	0.0451	7.90	9.47	0.8341
220.0	50.0	0.0438	7.90	9.65	0.8189
230.0	50.0	0.0426	7.91	9.80	0.8073
240.0	50.0	0.0417	7.93	10.01	0.7917
250.0	50.0	0.0411	7.94	10.28	0.7719
Ambient: 23.0°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		



Appendix – Test result (Operation mode: 70% power level)

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	volt-ampere (VA)	Power Factor
Sample 1					
210.0	50.0	0.0410	6.98	8.61	0.8105
220.0	50.0	0.0400	6.99	8.80	0.7942
230.0	50.0	0.0389	7.00	8.95	0.7815
240.0	50.0	0.0383	7.01	9.19	0.7625
250.0	50.0	0.0378	7.02	9.45	0.7428
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 2					
210.0	50.0	0.0408	6.96	8.58	0.8111
220.0	50.0	0.0399	6.97	8.77	0.7950
230.0	50.0	0.0391	6.98	9.00	0.7752
240.0	50.0	0.0385	6.99	9.23	0.7573
250.0	50.0	0.0377	7.00	9.43	0.7430
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 3					
210.0	50.0	0.0408	6.93	8.56	0.8085
220.0	50.0	0.0399	6.93	8.78	0.7895
230.0	50.0	0.0390	6.95	8.96	0.7749
240.0	50.0	0.0382	6.96	9.16	0.7603
250.0	50.0	0.0377	6.97	9.41	0.7405
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 4					
210.0	50.0	0.0407	6.97	8.55	0.8155
220.0	50.0	0.0397	6.98	8.75	0.7978
230.0	50.0	0.0390	6.99	8.96	0.7802
240.0	50.0	0.0382	7.00	9.17	0.7639
250.0	50.0	0.0375	7.02	9.36	0.7493
Ambient: 23.0°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 5					
210.0	50.0	0.0414	6.98	8.70	0.8017
220.0	50.0	0.0405	6.99	8.90	0.7845
230.0	50.0	0.0394	7.00	9.06	0.7726
240.0	50.0	0.0387	7.01	9.30	0.7544
250.0	50.0	0.0383	7.03	9.57	0.7341
Ambient: 23.0°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		



Appendix – Test result (Operation mode: 60% power level)

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	volt-ampere (VA)	Power Factor
Sample 1					
210.0	50.0	0.0371	5.95	7.79	0.7645
220.0	50.0	0.0363	5.96	8.01	0.7441
230.0	50.0	0.0356	5.98	8.19	0.7310
240.0	50.0	0.0351	5.99	8.42	0.7118
250.0	50.0	0.0348	6.01	8.70	0.6902
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 2					
210.0	50.0	0.0369	5.94	7.75	0.7667
220.0	50.0	0.0362	5.96	7.97	0.7473
230.0	50.0	0.0358	5.97	8.22	0.7255
240.0	50.0	0.0353	5.98	8.47	0.7067
250.0	50.0	0.0347	6.00	8.68	0.6910
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 3					
210.0	50.0	0.0370	5.91	7.76	0.7615
220.0	50.0	0.0364	5.92	8.02	0.7394
230.0	50.0	0.0356	5.94	8.18	0.7255
240.0	50.0	0.0351	5.95	8.42	0.7076
250.0	50.0	0.0348	5.97	8.70	0.6862
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 4					
210.0	50.0	0.0369	5.96	7.75	0.7687
220.0	50.0	0.0362	5.97	7.96	0.7506
230.0	50.0	0.0357	5.99	8.21	0.7295
240.0	50.0	0.0352	6.00	8.43	0.7120
250.0	50.0	0.0346	6.02	8.66	0.6948
Ambient: 23.0°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 5					
210.0	50.0	0.0376	5.96	7.90	0.7543
220.0	50.0	0.0370	5.97	8.14	0.7351
230.0	50.0	0.0361	5.99	8.30	0.7218
240.0	50.0	0.0356	6.00	8.52	0.7036
250.0	50.0	0.0353	6.02	8.84	0.6817
Ambient: 23.0°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		



Appendix – Test result (Operation mode: 50% power level)

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	volt-ampere (VA)	Power Factor
Sample 1					
210.0	50.0	0.0336	4.99	7.06	0.7070
220.0	50.0	0.0331	5.00	7.28	0.6869
230.0	50.0	0.0326	5.02	7.50	0.6698
240.0	50.0	0.0323	5.04	7.76	0.6590
250.0	50.0	0.0323	5.06	8.06	0.6277
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 2					
210.0	50.0	0.0335	4.98	7.03	0.7066
220.0	50.0	0.0330	4.99	7.26	0.6876
230.0	50.0	0.0329	5.01	7.54	0.6634
240.0	50.0	0.0327	5.03	7.83	0.6424
250.0	50.0	0.0322	5.05	8.03	0.6284
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 3					
210.0	50.0	0.0336	4.95	7.05	0.7018
220.0	50.0	0.0332	4.96	7.30	0.6796
230.0	50.0	0.0327	4.98	7.50	0.6644
240.0	50.0	0.0323	5.00	7.74	0.6464
250.0	50.0	0.0321	5.02	8.03	0.6257
Ambient: 23.4°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 4					
210.0	50.0	0.0335	4.99	7.03	0.7093
220.0	50.0	0.0331	5.01	7.28	0.6877
230.0	50.0	0.0328	5.02	7.56	0.6658
240.0	50.0	0.0325	5.04	7.80	0.6467
250.0	50.0	0.0322	5.06	8.03	0.6305
Ambient: 23.0°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

Sample 5					
210.0	50.0	0.0342	4.99	7.18	0.6943
220.0	50.0	0.0338	5.00	7.45	0.6721
230.0	50.0	0.0332	5.02	7.64	0.6571
240.0	50.0	0.0329	5.04	7.90	0.6385
250.0	50.0	0.0329	5.06	8.23	0.6155
Ambient: 23.0°C			PF: <input type="checkbox"/> Leading / <input checked="" type="checkbox"/> Lagging		

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