



# Test Report

Report No. : T2015-06992

Company : LG Electronics Inc.  
 Representative : Bon-Joon Koo  
 Address : 1, Gwanak-ro, Gwanak-gu, Seoul, 151-919, Rep. of Korea

1. Product Name : LED Street lighting  
 - Type and Model : 210/220/230/240/250 V~, 50 Hz, 38 W [model : S40w0wwxyz]
2. Use of Report : Elexon Charge Codes for inclusion in BSCP520
3. Date of Receipt : 2015. 07. 16.
4. Date of Test : 2015. 07. 17. - 2015. 08. 11.
5. Testing Method : Standards presented by the Client
6. Test Results : Attached

Tested by : Lee, Yong Sun

이영선 (이명선)

Approved by : Kyung, Jong Won

경종원

1. This report is based on the test and analysis performed with the sample(s) submitted by the client.  
 Therefore, the report does not guarantee the quality of entire products.
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3. The copy of this report is invalid for use.

2015. 08. 13.



President

Choi Kapheung

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# Test Result

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| Test Items     | Test Requirement   | unit | test result  |
|----------------|--|------|--------------|
| active power   | active Power of the LED lamp when input voltage and the dimming signal are applied as Attachment 1   | W    | attachment 1 |
| reactive power | reactive Power of the LED lamp when input voltage and the dimming signal are applied as Attachment 2 | VA   | attachment 2 |

- Remark : 1. Value of test result is by KS Q 5002 : 2014 (Statistical technique of the data)
2. Environment : temperature : (25 ± 5) °C , humidity : (65 ± 20) % R.H.
3. Test condition : Units were powered up for 1 hours to stabilize and measurements were taken after 3 minutes at each dimming level.
4. Test equipment
- Power Source : Pacific (model. 125AMX/Upc12), NO. 1125
  - Power Analyser : Voltech (model. PM3300), NO. 1191
  - Timer : Casio (model. HS-5), NO. 786
  - DC power supply : Agilent ( model. E3634A ), NO. 2526
5. Measurement uncertainty
- 95 % confidence measurement uncertainty for Power Analyser is 200 V to 0.02 %
6. Test Sample : Street Lighting(38 W version)
- sample 1 : S40vv0wwxyz(Lighting), LGP-060S-VR(Converter)
  - sample 2 : S40vv0wwxyz(Lighting), LGP-060S-VR(Converter)
  - sample 3 : S40vv0wwxyz(Lighting), LGP-060S-VR(Converter)
  - sample 4 : S40vv0wwxyz(Lighting), LGP-060S-VR(Converter)
  - sample 5 : S40vv0wwxyz(Lighting), LGP-060S-VR(Converter)





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attachment 1. active power (Watt)

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                 | 10                   | 37.06       | 37.18    | 36.10    | 37.06    | 36.12    |
| 220                 |                      | 37.10       | 37.16    | 36.15    | 37.13    | 36.17    |
| 230                 |                      | 37.13       | 37.30    | 36.18    | 37.20    | 36.22    |
| 240                 |                      | 37.41       | 37.31    | 36.20    | 37.27    | 36.21    |
| 250                 |                      | 37.46       | 37.43    | 36.21    | 37.33    | 36.29    |

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210V                | 9                    | 36.91       | 36.41    | 36.03    | 36.75    | 35.91    |
| 220V                |                      | 37.03       | 36.59    | 35.73    | 36.77    | 35.86    |
| 230V                |                      | 36.75       | 36.60    | 35.81    | 36.83    | 35.93    |
| 240V                |                      | 37.27       | 36.73    | 35.91    | 36.86    | 35.94    |
| 250V                |                      | 36.94       | 37.42    | 35.98    | 36.91    | 35.98    |

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210V                | 8                    | 33.90       | 33.41    | 33.04    | 33.69    | 32.71    |
| 220V                |                      | 33.71       | 33.43    | 32.66    | 33.73    | 32.83    |
| 230V                |                      | 33.83       | 33.60    | 32.68    | 33.76    | 32.89    |
| 240V                |                      | 34.07       | 33.67    | 32.72    | 33.84    | 33.00    |
| 250V                |                      | 33.93       | 34.34    | 32.76    | 33.94    | 33.02    |





# Test Result

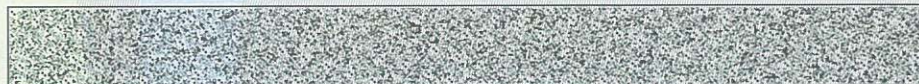
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attachment 1. active power (Watt)

| input<br>voltage<br>(Vac) | dimming signal<br>(Vdc) | Test result |          |          |          |          |
|---------------------------|-------------------------|-------------|----------|----------|----------|----------|
|                           |                         | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                       | 7                       | 30.70       | 30.31    | 29.92    | 30.82    | 30.00    |
| 220                       |                         | 30.77       | 30.19    | 29.44    | 30.91    | 30.01    |
| 230                       |                         | 30.59       | 30.65    | 29.54    | 30.96    | 30.05    |
| 240                       |                         | 31.05       | 30.59    | 29.55    | 30.97    | 30.07    |
| 250                       |                         | 30.85       | 31.49    | 29.54    | 31.04    | 30.10    |

| input<br>voltage<br>(Vac) | dimming signal<br>(Vdc) | Test result |          |          |          |          |
|---------------------------|-------------------------|-------------|----------|----------|----------|----------|
|                           |                         | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210V                      | 6                       | 27.83       | 27.28    | 26.82    | 27.53    | 27.09    |
| 220V                      |                         | 27.49       | 27.24    | 26.31    | 27.61    | 27.14    |
| 230V                      |                         | 27.42       | 27.49    | 26.29    | 27.72    | 27.11    |
| 240V                      |                         | 28.00       | 27.54    | 26.28    | 27.80    | 27.12    |
| 250V                      |                         | 27.63       | 28.39    | 26.32    | 27.90    | 27.12    |

| input<br>voltage<br>(Vac) | dimming signal<br>(Vdc) | Test result |          |          |          |          |
|---------------------------|-------------------------|-------------|----------|----------|----------|----------|
|                           |                         | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210V                      | 5                       | 24.57       | 24.15    | 23.77    | 24.56    | 23.87    |
| 220V                      |                         | 24.54       | 24.12    | 23.27    | 24.62    | 23.85    |
| 230V                      |                         | 24.50       | 24.30    | 23.35    | 24.66    | 23.78    |
| 240V                      |                         | 24.86       | 24.28    | 23.39    | 24.73    | 23.76    |
| 250V                      |                         | 24.52       | 25.23    | 23.47    | 24.77    | 23.81    |





# Test Result

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attachment 1. active power (Watt)

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                 | 4                    | 21.54       | 21.13    | 20.86    | 21.34    | 20.81    |
| 220                 |                      | 21.39       | 21.09    | 20.51    | 21.44    | 20.86    |
| 230                 |                      | 21.32       | 21.37    | 20.62    | 21.54    | 20.95    |
| 240                 |                      | 21.75       | 21.48    | 20.69    | 21.82    | 21.05    |
| 250                 |                      | 21.64       | 22.16    | 20.69    | 21.91    | 21.12    |

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210V                | 3                    | 18.61       | 18.33    | 18.02    | 18.46    | 18.07    |
| 220V                |                      | 18.57       | 18.37    | 17.62    | 18.53    | 18.07    |
| 230V                |                      | 18.65       | 18.60    | 17.64    | 18.62    | 18.11    |
| 240V                |                      | 18.16       | 18.62    | 17.58    | 18.76    | 18.19    |
| 250V                |                      | 18.87       | 19.30    | 17.64    | 18.88    | 18.27    |

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210V                | 2                    | 15.73       | 15.47    | 14.80    | 15.59    | 15.15    |
| 220V                |                      | 15.53       | 15.49    | 14.43    | 15.60    | 15.23    |
| 230V                |                      | 15.68       | 15.58    | 14.35    | 15.71    | 15.24    |
| 240V                |                      | 15.99       | 15.68    | 14.32    | 15.75    | 15.17    |
| 250V                |                      | 15.79       | 16.19    | 14.28    | 15.78    | 15.04    |





# Test Result

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attachment 1. active power (Watt)

| input<br>voltage<br>(Vac) | dimming signal<br>(Vdc) | Test result |          |          |          |          |
|---------------------------|-------------------------|-------------|----------|----------|----------|----------|
|                           |                         | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                       | 1                       | 12.51       | 12.34    | 11.83    | 12.34    | 11.88    |
| 220                       |                         | 12.46       | 12.31    | 11.59    | 12.34    | 11.76    |
| 230                       |                         | 12.47       | 12.39    | 11.49    | 12.49    | 11.78    |
| 240                       |                         | 12.68       | 12.48    | 11.42    | 12.55    | 11.80    |
| 250                       |                         | 12.52       | 13.12    | 11.49    | 12.58    | 11.82    |





# Test Result

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attachment 2. reactive power (VA)

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                 | 10                   | 39.03       | 39.14    | 37.97    | 39.08    | 38.29    |
| 220                 |                      | 39.34       | 39.46    | 38.38    | 39.51    | 38.76    |
| 230                 |                      | 39.90       | 40.01    | 38.84    | 40.00    | 39.29    |
| 240                 |                      | 40.69       | 40.43    | 39.38    | 40.55    | 39.85    |
| 250                 |                      | 41.29       | 41.05    | 39.95    | 41.16    | 40.54    |

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210V                | 9                    | 38.89       | 38.38    | 37.89    | 38.77    | 38.07    |
| 220V                |                      | 39.29       | 38.90    | 38.05    | 39.14    | 38.45    |
| 230V                |                      | 39.55       | 39.34    | 38.55    | 39.63    | 39.00    |
| 240V                |                      | 40.54       | 39.93    | 39.14    | 40.16    | 39.58    |
| 250V                |                      | 40.82       | 40.99    | 39.75    | 40.76    | 40.23    |

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                 | 8                    | 35.95       | 35.46    | 35.00    | 35.78    | 34.99    |
| 220                 |                      | 36.15       | 35.88    | 35.15    | 36.21    | 35.55    |
| 230                 |                      | 36.81       | 36.51    | 35.66    | 36.71    | 36.11    |
| 240                 |                      | 37.52       | 37.08    | 36.21    | 37.31    | 36.78    |
| 250                 |                      | 37.99       | 38.09    | 36.87    | 37.96    | 37.44    |





# Test Result

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attachment 2. reactive power (VA)

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                 | 7                    | 32.90       | 32.48    | 32.06    | 33.00    | 32.38    |
| 220                 |                      | 33.35       | 32.80    | 32.19    | 33.50    | 32.86    |
| 230                 |                      | 33.74       | 33.71    | 32.79    | 34.04    | 33.44    |
| 240                 |                      | 34.70       | 34.18    | 33.39    | 34.58    | 34.06    |
| 250                 |                      | 35.12       | 35.36    | 33.98    | 35.26    | 34.70    |

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210V                | 6                    | 30.18       | 29.63    | 29.16    | 29.89    | 29.66    |
| 220V                |                      | 30.31       | 30.04    | 29.33    | 30.42    | 30.21    |
| 230V                |                      | 30.80       | 30.78    | 29.87    | 31.00    | 30.73    |
| 240V                |                      | 31.86       | 31.35    | 30.45    | 31.64    | 31.35    |
| 250V                |                      | 32.18       | 32.52    | 31.16    | 32.35    | 32.09    |

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                 | 5                    | 27.14       | 26.70    | 26.32    | 27.08    | 26.65    |
| 220                 |                      | 27.55       | 27.13    | 26.55    | 27.59    | 27.17    |
| 230                 |                      | 28.13       | 27.84    | 27.17    | 28.17    | 27.72    |
| 240                 |                      | 29.01       | 28.40    | 27.80    | 28.89    | 28.40    |
| 250                 |                      | 29.45       | 29.69    | 28.57    | 29.61    | 29.17    |





# Test Result

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attachment 2. reactive power (VA)

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                 | 4                    | 24.36       | 23.91    | 23.61    | 24.20    | 23.81    |
| 220                 |                      | 24.72       | 24.38    | 23.94    | 24.83    | 24.42    |
| 230                 |                      | 25.32       | 25.24    | 24.63    | 25.51    | 25.12    |
| 240                 |                      | 26.30       | 25.97    | 25.37    | 26.39    | 25.83    |
| 250                 |                      | 26.92       | 26.96    | 26.06    | 27.09    | 26.56    |

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210V                | 3                    | 21.70       | 21.38    | 21.10    | 21.60    | 21.32    |
| 220V                |                      | 22.27       | 22.01    | 21.52    | 22.17    | 21.93    |
| 230V                |                      | 22.93       | 22.75    | 22.14    | 22.81    | 22.56    |
| 240V                |                      | 23.73       | 23.41    | 22.77    | 23.57    | 23.30    |
| 250V                |                      | 24.39       | 24.42    | 23.63    | 24.45    | 24.10    |

| input voltage (Vac) | dimming signal (Vdc) | Test result |          |          |          |          |
|---------------------|----------------------|-------------|----------|----------|----------|----------|
|                     |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                 | 2                    | 19.34       | 19.01    | 18.76    | 19.18    | 19.08    |
| 220                 |                      | 19.88       | 19.62    | 19.10    | 19.79    | 19.79    |
| 230                 |                      | 20.53       | 20.35    | 19.86    | 20.59    | 20.49    |
| 240                 |                      | 21.49       | 21.19    | 20.51    | 21.39    | 21.08    |
| 250                 |                      | 22.00       | 22.29    | 21.15    | 22.18    | 22.04    |





# Test Result

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| attachment 1. reactive power (VA) |                      |             |          |          |          |          |
|-----------------------------------|----------------------|-------------|----------|----------|----------|----------|
| input voltage (Vac)               | dimming signal (Vdc) | Test result |          |          |          |          |
|                                   |                      | sample 1    | sample 2 | sample 3 | sample 4 | sample 5 |
| 210                               | 1                    | 17.15       | 16.88    | 16.70    | 17.12    | 17.03    |
| 220                               |                      | 17.79       | 17.45    | 16.95    | 17.87    | 18.64    |
| 230                               |                      | 18.60       | 18.47    | 18.14    | 18.89    | 19.97    |
| 240                               |                      | 20.42       | 19.55    | 19.39    | 19.76    | 21.14    |
| 250                               |                      | 21.07       | 21.59    | 20.64    | 21.37    | 22.11    |

