

UMS SUMMARY TEST REPORT

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ISSUED BY:
CRANAGE EMC TESTING LIMITED
STABLE COURT
OAKLEY
MARKET DRAYTON
SHROPSHIRE, TF9 4AG



Report No: **U0039** Date of Issue: **22nd August, 2014**

This document summarises the results of testing to ascertain the appropriate Elexon Charge Codes for inclusion in BSCP520

Tested & Inspected for: **LG Electronics**
San 4-1
Nakseongdae-Dong
Gwanak-Gu
Seoul
151-919
Korea

Test Dates: **13th August – 21st August, 2014**
Receipt Date of Test Item: **11th August, 2014**

Sample 1

Test Item Description: **Street Lighting (56W Version)**
Manufacturer: **LG Electronics**
Model Number: **S60xx0yyzAA (Light)**
LGP-60VR (Incorporated converter)
Serial Number: **Production Sample**

Sample 2

Test Item Description: **Street Lighting (56W Version)**
Manufacturer: **LG Electronics**
Model Number: **S60xx0yyzAA (Light)**
LGP-60VR (Incorporated converter)
Serial Number: **Production Sample**

Sample 3

Test Item Description: **Street Lighting (56W Version)**
Manufacturer: **LG Electronics**
Model Number: **S60xx0yyzAA (Light)**
LGP-60VR (Incorporated converter)
Serial Number: **Production Sample**

Sample 4

Test Item Description: **Street Lighting (56W Version)**
Manufacturer: **LG Electronics**
Model Number: **S60xx0yyzAA (Light)**
LGP-60VR (Incorporated converter)
Serial Number: **Production Sample**

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Sample 5

Test Item Description:	Street Lighting (56W Version)
Manufacturer:	LG Electronics
Model Number:	S60xx0yyzAA (Light) LGP-60VR (Incorporated converter)
Serial Number:	Production Sample

Approved Signatories: M. Richens - Technical Director



APPROVED SIGNATORY

Verification Signatories: R. Flynn - Test Engineer



VERIFICATION SIGNATORY

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Mode of Operation: The test item was powered and the light output was 'ON'. The light was set to various dimming levels as requested by the manufacturer by inputting various voltages as highlighted in the results tables. A photograph showing the test item can be found on page 13.

Unit under test: - Units were powered up for 60 minutes to stabilise.

Test Condition: - Measurements were taken after 10 minutes at each voltage level.

All results are rounded to 2 decimal places.

Mode 1 – Full Intensity (10V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	55.29	54.30	55.33	55.50	55.25
220	55.37	54.36	55.40	55.56	55.31
230	55.50	54.46	55.53	55.63	55.39
240	55.69	54.61	55.70	55.72	55.53
250	56.02	54.82	56.11	55.87	55.71

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	66.00	64.33	66.16	65.33	65.97
220	67.51	65.75	67.66	66.91	67.46
230	69.07	67.21	69.21	68.38	69.02
240	71.34	68.74	71.51	69.92	70.64
250	76.59	70.71	77.99	71.45	72.29

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Mode 2 – Dimmed (9V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	54.83	54.08	54.62	54.81	54.88
220	54.99	54.12	54.77	54.95	55.07
230	55.02	54.28	54.83	55.16	55.08
240	55.35	54.40	54.91	55.17	55.18
250	55.56	54.50	55.22	55.36	55.30

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	64.89	64.77	64.90	65.56	65.51
220	66.36	66.57	66.32	67.03	67.13
230	67.72	68.22	67.82	68.68	68.62
240	69.96	69.81	69.98	70.18	70.18
250	75.07	71.83	76.35	71.81	71.77

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Mode 3 – Dimmed (8V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	50.15	49.44	49.93	50.30	50.12
220	50.34	49.68	49.94	50.40	50.08
230	50.52	49.71	50.10	50.54	50.18
240	50.73	49.93	50.56	50.59	50.42
250	51.23	50.23	50.81	50.87	50.84

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	60.92	61.18	61.00	61.67	61.57
220	62.44	62.91	62.44	63.23	63.07
230	64.48	64.51	64.52	64.91	64.71
240	68.28	66.32	70.26	66.48	66.48
250	75.43	70.88	76.75	68.25	69.02

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Mode 4 – Dimmed (7V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	45.71	45.03	45.28	45.46	45.79
220	45.80	45.15	45.41	45.58	45.95
230	46.10	45.33	45.52	45.71	46.14
240	46.42	45.60	45.94	45.94	46.28
250	46.82	45.75	46.31	46.34	46.61

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	57.31	57.68	57.21	57.70	58.09
220	58.99	59.39	58.93	59.39	59.81
230	60.98	61.22	63.77	61.14	61.37
240	66.03	63.90	69.68	62.96	63.59
250	72.62	70.00	73.78	65.22	68.13

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Mode 5 – Dimmed (6V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	41.32	40.65	40.62	41.34	41.45
220	41.60	40.85	40.94	41.54	41.53
230	41.81	41.06	41.26	41.72	41.80
240	42.11	41.32	41.43	41.84	41.89
250	42.32	41.64	41.73	42.16	42.07

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	53.85	54.27	53.54	54.50	54.52
220	56.33	56.13	58.03	56.32	56.22
230	60.41	58.54	62.76	58.16	58.45
240	66.13	62.85	66.98	60.11	62.20
250	68.73	68.02	69.38	62.38	67.43

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Mode 6 – Dimmed (5V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	37.12	36.51	36.32	37.00	36.99
220	37.27	36.68	36.56	37.25	37.28
230	37.60	37.05	36.70	37.43	37.44
240	37.78	37.17	36.98	37.65	37.68
250	38.10	37.41	37.24	37.93	38.02

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	51.13	51.20	52.05	51.26	51.15
220	54.88	53.54	56.08	53.22	53.24
230	60.02	57.51	60.58	55.15	55.66
240	62.33	62.16	63.37	57.41	61.61
250	65.47	65.05	66.28	62.30	64.86

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Mode 7 – Dimmed (4V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	32.90	32.28	32.04	32.78	32.51
220	33.11	32.40	32.27	32.83	32.83
230	33.20	32.59	32.48	33.03	32.98
240	33.45	32.83	32.65	33.21	33.21
250	33.58	33.06	32.75	33.47	33.39

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	49.11	48.52	50.49	48.29	48.02
220	53.88	51.97	54.77	50.19	51.22
230	56.29	56.46	57.07	52.34	56.10
240	58.91	59.16	59.89	57.12	58.99
250	61.24	61.63	61.72	60.12	61.46

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Mode 8 – Dimmed (3V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	28.64	28.10	27.70	28.12	28.21
220	28.82	28.40	27.97	28.28	28.46
230	29.00	28.58	28.16	28.50	28.67
240	29.09	28.66	28.33	28.70	28.82
250	29.31	28.93	28.40	28.89	28.93

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	48.08	47.11	48.84	45.23	46.18
220	50.71	51.40	51.29	47.84	50.63
230	53.20	54.00	53.79	51.84	53.26
240	55.42	56.30	55.85	54.31	55.64
250	57.84	58.55	58.21	56.83	57.67

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Mode 9 – Dimmed (2V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	24.40	23.93	23.54	24.18	24.10
220	24.45	24.04	23.68	24.40	24.20
230	24.72	24.20	23.85	24.58	24.46
240	24.92	24.45	24.04	24.75	24.66
250	25.17	24.68	24.27	24.94	24.75

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	45.18	45.78	45.49	43.41	45.10
220	47.37	48.20	47.52	46.82	47.53
230	49.87	50.45	49.99	49.31	49.82
240	52.43	52.99	52.34	51.48	52.32
250	54.85	55.48	54.71	53.89	54.68

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Mode 10 – Dimmed (1V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	20.09	19.64	19.38	19.80	20.11
220	20.27	19.85	19.56	20.01	20.11
230	20.45	20.05	19.70	20.22	20.27
240	20.67	20.26	19.90	20.40	20.49
250	20.94	20.51	20.15	20.62	20.73

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	42.02	42.65	42.12	41.37	42.25
220	44.50	45.21	44.50	43.80	44.61
230	46.92	47.74	46.90	46.24	47.07
240	49.34	50.21	49.29	48.58	49.54
250	51.69	52.68	51.68	50.99	52.01

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Ambient temperature range recorded during test period:
20.0°C

Test Equipment

Asset Number	Description	Calibration Date	Calibration Due
AN288	Power Source	-	-
AN874	Power Source	-	-
AN1162	Power Analyser	16/07/2014	15/07/2015
AN452	Timer	-	-

Photographs of the Test Item



Above: Equipment under test.

Measurement Uncertainty

The 95 % confidence measurement uncertainty for AC Power (Analyser) is 0.17%.