

UMS SUMMARY TEST REPORT

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



Report No: **U0039R2** Date of Issue: **29th 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: **12th August – 28th August, 2014**
Receipt Date of Test Item: **11th August, 2014**

Sample 1

Test Item Description: **Street Lighting (92W Version)**
Manufacturer: **LG Electronics**
Model Number: **S90xx0yyzBA (Light)**
LGP-120A-VR (Incorporated converter)
Serial Number: **Production Sample**

Sample 2

Test Item Description: **Street Lighting (92W Version)**
Manufacturer: **LG Electronics**
Model Number: **S90xx0yyzBA (Light)**
LGP-120A-VR (Incorporated converter)
Serial Number: **Production Sample**

Sample 3

Test Item Description: **Street Lighting (92W Version)**
Manufacturer: **LG Electronics**
Model Number: **S90xx0yyzBA (Light)**
LGP-120A-VR (Incorporated converter)
Serial Number: **Production Sample**

Sample 4

Test Item Description: **Street Lighting (92W Version)**
Manufacturer: **LG Electronics**
Model Number: **S90xx0yyzBA (Light)**
LGP-120A-VR (Incorporated converter)
Serial Number: **Production Sample**

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Sample 5

Test Item Description:	Street Lighting (92W Version)
Manufacturer:	LG Electronics
Model Number:	S90xx0yyzBA (Light) LGP-120A-VR (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	88.50	87.48	87.71	86.80	87.72
220	88.34	87.35	87.40	86.49	87.46
230	88.19	87.30	87.05	86.35	87.24
240	88.08	87.22	86.83	86.30	87.13
250	88.01	87.19	86.76	86.30	87.12

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	94.00	92.79	93.22	92.23	93.25
220	94.61	93.39	93.72	92.70	93.79
230	95.30	94.16	94.27	93.42	94.44
240	96.08	94.97	94.99	94.30	95.26
250	96.96	95.87	95.90	95.26	96.24

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Mode 2 – Dimmed (9V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	86.00	84.76	85.80	83.80	84.73
220	85.76	84.61	85.63	83.84	84.94
230	85.74	84.33	85.39	83.67	84.92
240	85.58	84.58	85.00	83.57	84.96
250	85.53	84.71	85.01	83.58	84.86

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	91.64	90.55	91.06	89.36	89.81
220	92.21	91.19	91.65	90.20	90.81
230	93.04	91.82	92.22	90.93	91.62
240	93.80	93.01	92.78	91.76	92.51
250	94.74	94.12	93.74	92.76	93.30

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Mode 3 – Dimmed (8V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	76.17	74.76	76.02	74.57	75.07
220	76.11	75.09	76.16	74.58	75.20
230	76.38	75.19	76.30	74.74	75.33
240	76.00	75.31	76.36	74.59	75.51
250	75.70	75.46	76.04	74.70	75.53

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	82.38	81.11	81.86	80.69	80.76
220	83.21	82.35	82.83	81.57	81.72
230	84.41	83.41	83.87	82.69	82.72
240	85.07	84.52	84.92	83.55	83.83
250	85.89	85.76	85.65	84.71	84.83

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Mode 4 – Dimmed (7V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	67.17	66.23	66.44	65.65	65.98
220	66.98	66.18	66.51	65.68	66.27
230	67.15	66.58	66.74	65.73	66.29
240	67.04	66.67	66.78	65.64	66.31
250	66.96	66.83	66.73	65.52	66.48

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	74.08	73.24	72.99	72.45	72.33
220	74.89	74.18	73.99	73.45	73.51
230	76.11	75.65	75.24	74.57	74.51
240	77.16	76.85	76.36	75.56	75.56
250	78.23	78.16	77.46	76.65	76.78

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Mode 5 – Dimmed (6V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	57.93	57.20	57.60	56.94	57.40
220	57.99	57.55	57.78	57.02	57.43
230	57.90	57.67	57.98	56.71	57.56
240	57.95	57.74	58.00	56.68	57.54
250	57.88	57.74	58.03	56.27	57.45

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	65.76	65.13	65.01	64.61	64.56
220	66.93	66.56	66.25	65.76	65.60
230	68.02	67.84	67.55	66.64	66.75
240	69.27	69.12	68.74	67.84	67.88
250	70.52	70.46	70.04	68.84	69.09

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Mode 6 – Dimmed (5V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	48.93	48.71	48.95	47.65	48.02
220	49.17	48.76	49.01	47.97	48.13
230	49.31	48.62	49.23	47.86	48.40
240	49.44	48.82	49.20	47.73	48.44
250	49.34	48.92	49.09	47.75	48.45

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	57.93	57.72	57.15	56.45	56.26
220	59.38	58.97	58.28	57.93	57.49
230	60.71	60.18	59.64	59.13	58.93
240	62.21	61.74	60.89	60.42	60.30
250	63.59	63.34	62.20	61.96	61.71

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Mode 7 – Dimmed (4V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	40.60	39.86	40.28	39.56	40.13
220	40.71	39.93	40.26	39.65	40.07
230	40.98	40.24	40.41	39.43	40.30
240	41.06	40.25	40.60	39.47	40.28
250	41.14	40.37	40.70	39.68	40.33

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	50.92	50.29	49.68	49.66	49.55
220	52.37	51.75	50.88	51.09	50.79
230	54.04	53.48	52.37	52.40	52.34
240	55.64	55.08	53.94	53.97	53.76
250	57.24	56.75	55.46	55.62	55.27

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Mode 8 – Dimmed (3V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	32.37	31.44	31.45	31.48	31.89
220	32.53	31.61	31.60	31.49	31.76
230	32.71	31.74	31.87	31.54	31.82
240	32.77	31.97	31.88	31.68	31.94
250	32.90	32.11	32.06	31.72	32.19

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	44.42	43.75	42.56	43.26	42.93
220	46.09	45.45	44.09	44.80	44.29
230	47.79	47.17	45.78	46.38	45.84
240	49.43	48.96	47.32	48.03	47.44
250	51.15	50.71	48.97	49.62	49.16

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Mode 9 – Dimmed (2V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	24.13	23.74	23.91	24.05	23.87
220	24.29	23.92	24.13	24.17	24.15
230	24.56	24.20	24.23	24.28	24.29
240	24.89	24.38	24.25	24.41	24.35
250	24.97	24.49	24.33	24.38	24.35

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	38.55	38.33	37.08	37.91	37.13
220	40.36	40.12	38.81	39.59	38.88
230	42.23	41.98	40.47	41.27	40.54
240	44.11	43.77	42.10	42.95	42.14
250	45.80	45.58	43.74	44.51	43.72

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Mode 10 – Dimmed (1V)

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	16.71	16.67	15.59	15.41	15.44
220	16.83	16.76	15.72	15.53	15.54
230	16.92	16.86	15.81	15.64	15.64
240	16.96	17.03	15.88	15.76	15.73
250	17.05	17.22	16.02	15.90	15.85

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	33.95	33.89	31.54	32.38	31.70
220	35.81	35.73	33.25	34.19	33.45
230	37.69	37.61	34.99	36.03	35.26
240	39.57	39.52	36.78	37.89	37.03
250	41.34	41.47	38.62	39.77	38.84

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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

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Above: Equipment under test.

Measurement Uncertainty

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