File E344519
Project 4788344437

February 9, 2018

REPORT

on

COMPONENT - Light-emitting-diode Arrays, Modules and Controllers

SAMSUNG ELECTRONICS CO LTD
YONGIN-SI, GYEONGGI-DO, KOREA

DESCRIPTION

PRODUCT COVERED:

*USR, CNR – Component, LED modules, **see ELECTRICAL RATINGS table for models.**

ELECTRICAL RATINGS:

Model No.	Input [x] CC [ ] CV [x] LED array does not have a supply feed through				[ ]Output (a) [ ] CC [ ] CV			
	Voltage [ ] Vac [x] Vdc	[ ] Hz	Current (A)	Power (W)	Voltage [ ] Vac [ ] Vdc	[ ] Hz	Current (A)	Power (W)
SL-Bux4N90LA$$	48.4	N/A	1.6	77.44	N/A	N/A	N/A	N/A
SL-Bux2N70LA$$	24.2	N/A	1.6	38.72	N/A	N/A	N/A	N/A
SL-Bux3N80LA$$	24.2	N/A	2.2	53.24	N/A	N/A	N/A	N/A
SL-Bux1N60LA$$	12.1	N/A	2.2	26.62	N/A	N/A	N/A	N/A
SL-Bux2N80LA$$	24.2	N/A	1.6	38.72	N/A	N/A	N/A	N/A
SL-Bux1N30LA$$	12.1	N/A	1.6	19.36	N/A	N/A	N/A	N/A
SI-Bux441560$$	**60.0**	**N/A**	**1.6**	**96.0**	**N/A**	**N/A**	**N/A**	**N/A**
SI-Bux321560$$	**30.0**	**N/A**	**2.2**	**66.0**	**N/A**	**N/A**	**N/A**	**N/A**
SI-Bux221560$$	**30.0**	**N/A**	**1.6**	**48.0**	**N/A**	**N/A**	**N/A**	**N/A**
SI-Bux221280$$	**30.0**	**N/A**	**1.6**	**48.0**	**N/A**	**N/A**	**N/A**	**N/A**
SI-Bux161280$$	**15.0**	**N/A**	**2.2**	**33.0**	**N/A**	**N/A**	**N/A**	**N/A**
SI-Bux117280$$	**15.0**	**N/A**	**1.6**	**24.0**	**N/A**	**N/A**	**N/A**	**N/A**

a- Applies for LED arrays with a supply feed through as well as LED Control Modules

MODEL NOMENCLATURE:

u - Represent any alphanumeric code to denote Color Rendering Index of LEDs which is unrelated safety.
x - Represent any alphanumeric code to denote correlated color temperature of LEDs which is unrelated safety.
$$ - Represent any alphanumeric code to denote customer information for marketing purpose only.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

USR – Products designated USR have been investigated using US requirements as noted in the Test Record.

CNR – Products designated CNR have been investigated using Canadian requirements as noted in the Test Record.

Product Characteristics-

				Additionally evaluated to UL 8750 Supplements noted below:		
Model No. **[**x**]** applies to all models- see electrical ratings.	Input type	[ ] Output type (a)	Rated for	[ ] SF- Wired control Circuits(d)	[x] SG-	[ ] SH- Phase cut dimming
SL-Bux4N90LA$$	[x] Branch Circuit (Mains) [ ] Isolated Circuit [ ] Class 2 (b) [ ] LVLE (c1) [ ] LED Class 2 (c2)	[ ] Branch Circuit (Mains) [ ] Isolated Circuit [ ] Class 2 (b) [ ] LVLE (c1) [ ] LED Class 2 (c2)	[ ] Dry [x] Damp [ ] Wet	[ ] Isolated [ ] Not Isolated	Tref max- Tc 127.7 °C	[ ] Dimmable [ ] Dimmable - dimmer model(s) xxx made by xxx
SL-Bux2N70LA$$					Tref max- Tc 130 °C	
SL-Bux3N80LA$$					Tref max- Tc 130 °C	
SL-Bux1N60LA$$					Tref max- Tc 130 °C	
SL-Bux2N80LA$$					Tref max- Tc 130 °C	
SL-Bux1N30LA$$					Tref max- Tc 130 °C	
SI-Bux441560$$					**Tref max- Tc 130.0 °C**	
SI-Bux321560$$					**Tref max- Tc 130.0 °C**	
SI-Bux221560$$					**Tref max- Tc 130.0 °C**	
SI-Bux221280$$					**Tref max- Tc 130.0 °C**	
SI-Bux161280$$					**Tref max- Tc 129.5 °C**	
SI-Bux117280$$					**Tref max- Tc 129.8 °C**	

a- Applies for LED arrays with a supply feed through as well as LED Control Modules
b- As defined in **[ ]** UL 8750, Clause 7.12.1 **[ ]** and CAN/CSA-C22.2 No. 250.13, Clause 8.12
c1- As defined in UL 8750, Section 8.16
c2- As defined in CAN/CSA-C22.2 No. 250.13, Annex A
d- Supplement SF has a future effective date: 2020-05-01

Conditions of Acceptability –

Use – For use only in (or with) complete equipment where the acceptability of the combination is determined by UL LLC.

1. The temperature test for these LED arrays were performed according to Supplement SG using a manufacturer recommended heat sink as described in this report. During temperature testing of the end product, evaluation of the LED array can be limited to the temperature at the Test Measurement Point Tc. The absolute value at this point cannot exceed the specific temperature for each model is shown in the following table.

Components	Temperature, °C	The location of the Tc point
SL-Bux4N90LA$$	127.7	Ill. 1
SL-Bux2N70LA$$	130	Ill. 2
SL-Bux3N80LA$$	130	Ill. 3
SL-Bux1N60LA$$	130	Ill. 4
SL-Bux2N80LA$$	130	Ill. 5
SL-Bux1N30LA$$	130	Ill. 6
SI-Bux441560$$	**130**	**Ill. 7**
SI-Bux321560$$	**130**	**Ill. 8**
SI-Bux221560$$	**130**	**Ill. 9**
SI-Bux221280$$	**130**	**Ill. 10**
SI-Bux161280$$	**129.5**	**Ill. 11**
SI-Bux117280$$	**129.8**	**Ill. 12**

2. These products are intended for building in. Acceptability with respect to mounting, spacing, casualty, temperature and segregation is to be determined as part of the end device evaluation.

*3. These products are provided with push-in terminals for supply connection. These terminals are intended for use with 18 ~ 24 AWG with 7.5 ~ 8.5 mm strip length, **suitable conductor type shall be checked on the detailed description of each model.** Consideration shall be taken in the end-use application.

4. These products have been evaluated for use with a source of supply noted in the product characteristics table (input type) and electrical ratings noted in the electrical ratings table. Suitability of these products with other sources of supply or electrical ratings is to be determined in the end product.

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Conditions of Acceptability – (CONT'D)

5. The LED modules shall be installed in compliance with the enclosure, mounting, accessibility and spacing requirements of the end use application.

6. The LED Module is intended only for use in dry and damp locations. The use in other environments shall be considered in the end product evaluation.

7. All Tests were conducted with an aluminum heat sink, overall 680 mm by 50 mm by 30 mm (L x W x H) with 11 fins for models SL-Bux4N90LA$$, SL-Bux3N80LA$$, SL-Bux2N80LA$$, SI-Bux441560$$, SI-Bux321560$$, SI-Bux221560$$, SI-Bux221280$$, SI-Bux161280$$ and SI-Bux117280$$ and overall 500 mm by 50 mm by 30 mm (L x W x H) with 11 fins for models SL-Bux2N70LA$$, SL-Bux1N60LA$$ and SL-Bux1N30LA$$.