SORAA

<u>Electrical compatibility – A60 230V - International</u>

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General compatibility guidelines

Scope

This document provides the basic guidelines regards electrical compatibility of SORAA 230V A60 lamps.

Dimmer Compatibility

SORAA 230V A60 lamps are made to work with trailing edge (reverse phase) and leading edge (forward phase) phase cut dimmers. However, the use of trailing edge dimmers is preferred and will show in general better behavior.

Dimmer compatibility tables are on pages 3-5.

The percentages for each dimmer combination are the percentage of light output that we were able to dim down to without seeing any problems like flicker/shimmer. Anything 30% or above is considered not compatible and you will see a "NC" in a grey cell.

There might be a minimum wattage load on the dimmer. If this minimum load is not met, there might be compatibility issues.

Maximum number of lamps on a dimmer

The following need to be considered when determining the amount of lamps on a dimmer.

- 1. SORAA tests have been carried out with 1 lamp unless stated otherwise.
- 2. There is a repetitive, very brief current spike the LED will see twice per cycle. This current spike has to be provided by the dimmer, and will affect the recommended fixture load on each dimmer.
- 3. Ultimately the dimmer manufacturer is the only one with authority to rate their product, but SORAA can give an Engineering estimate.
- 4. We recommend to use a 5.0 de-rating factor for incandescent/halogen dimmers loaded with our 230V lamps.

For example for a 500W dimmer it would mean 500/5 = 100W of LED, so an estimated maximum of 9 lamps at 11W.

Disclaimer

Compatibility tests are conducted by Soraa only as guidance for the user.

All tests are conducted under bench conditions; results may differ from test results depending on conditions at the application site.

Results may vary due to variability in component choices and manufacturing processes by dimmer manufacturers.

For more information on the dimmers please find specs on the manufacturer's website.

SORAA A60 230V - DIMMER COMPATIBILITY LIST - International

Dimmer Manufacturer	Dimmer Model	Dimmer part number	Dimmer mode	Number of lamps tested	Dim (%)
Aurora		DSP400X	LE	1, 2	NC
Bticino		NT4411N	TE	1, 2	17%
Busch		2247 U	LE	1, 2	9%
Casambi		CBU-TED	TE	1, 2	1%
Clipsal		32E450UDM	TE	1, 2	20%
DIGINET		DGLCDM400 (MEDM)	TE	1, 2	NC
Feller		3314.12	TE	1, 2	17%
Helvar	Digidim	454	TE	1, 2	5%
Jung		1224 LED UDE	TE	1, 2	12%
Jung		243 EX	TE	1, 2	28%
Lutron	Energy Savr Node QS (for Quantum and QS systems)	QSNE-4A-D	TE	1, 2	NC
Lutron	Energy Savr Node QS (for Quantum and QS systems)	QSNE-4A-D	LE	1, 2	NC
Lutron	Grafik Eye QS	Grafik Eye QS	LE	1, 2	NC
Lutron	Grafik Eye QS + Interface	Grafik Eye QS + ELVI interface	Adaptive-TE	1, 2	1 lamp:20% 2 lamps:10%
Panasonic		WEG575181H	LE	1, 2	NC
Rako		RMT500	TE	1, 2	1%
RVE		RV5	LE	1, 2	7%
RVE		RVLED	TE	1, 2	10%
Varilight	V-PRO	JQP401W	TE	1, 2	12%
Vossloh-Schwabe		554591 (5-250W)	TE	1, 2	5%
Vossloh-Schwabe		OneDim	TE	1, 2	1%
Yokis		MTV500E	Adaptive-TE	1, 2	11%
Zano	ZGRIDLED+	ZMC250	Adaptive-TE	1, 2	10%

SORAA A60 230V - DIMMER COMPATIBILITY LIST - International

Notes:

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All tests are conducted under bench conditions; results may differ from test results depending on conditions at the application site

Results may vary due to variability in component choices and manufacturing processes by the dimmer manufacturer

Regards compatibility tests conducted by dimmer manufacturer, please contact the dimmer manufacturer or Soraa for more details and/or reports.

(*) Test results with this dimmer added to the compatibility list as of Revision 18Q3

%	Dims to < 20% (of the measured light output)
%	Dims to 20-30% (of the measured light output)
NC	Not compatible (or dims to >30%)
Blank cell	Not tested