

SORAA

Electrical compatibility – A60 230V - International

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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 leading edge dimmers is not recommended, as the lamps may emit a low level of audible noise when used with some leading edge dimmers.

If using leading edge dimmers, testing with the intended dimmer is recommended to ensure acceptable audible levels at the application site.

Dimmer compatibility tables are on pages **3-6**.

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 Series	Dimmer part number	Dimmer mode	Number of lamps tested	Dim (%)	Comments
Aurora		DSP400X	LE	1, 2, 5, 10	NC	Lamps may buzz with LE dimmers
Bticino		NT4411N	TE	1, 2	17%	
Busch		2247 U	LE	1, 2	9%	Lamps may buzz with LE dimmers
Busch		6523 U	LE	1, 9	18%	Limited by dimmer travel Lamps may buzz with LE dimmers
Busch		6523 U - 102	LE	1, 9	NC	Lamps may buzz with LE dimmers
Cabac		HNS630DT	TE	1, 2	18%	Limited by dimmer travel
Casambi		CBU-TED	TE	1, 2	1%	
				3, 4	25%	
Clipsal		32E450UDM	TE	1, 2, 5, 10, 15	29%	
Clipsal		L5504D2U	Adaptive-TE	5, 10	NC	
DIGINET		DGLCDM400 (MEDM)	TE	1, 2	3%	
Eltako		EUD61NPN-UC	TE	1, 9	11%	Limited by dimmer travel
Feller		3314.12.FMI.61	TE	1, 2, 5, 10	27%	
				15	NC	
Feller		40200.LED.FMI.61	TE	1, 9	19%	
GIRA		030700 / I02	TE	1, 9	24%	Limited by dimmer travel
GIRA		238500	TE	1, 9	16%	
Helvar	Digidim	452	TE	7, 15	11%	
Helvar	Digidim	454	TE	1, 2, 7, 15	18%	

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Dimmer Manufacturer	Dimmer Series	Dimmer part number	Dimmer mode	Number of lamps tested	Dim (%)	Comments
Jung		1224 LED UDE	TE	1, 2	12%	
Jung		243 EX	TE	1, 2	28%	
Legrand	HPM	450P	N/A	1, 2	NC	
Lumex	Load Smart Gen2	LT1D450LS	N/A	1, 2	NC	
Lutron	Energy Savr Node QS (for Quantum and QS systems)	QSNE-4A-D	TE	1, 2, 7, 15	NC	
Lutron	Energy Savr Node QS (for Quantum and QS systems)	QSNE-4A-D	LE	1, 2	NC	Lamps may buzz with LE dimmers
Lutron	Grafik Eye QS	Grafik Eye QS	LE	1, 2, 7, 15	NC	Lamps may buzz with LE dimmers
Lutron	Grafik Eye QS + Interface	Grafik Eye QS + ELVI interface	Adaptive-TE	1, 2, 7, 15	1 lamp:20% 2, 7, 15 lamps:10%	
Lutron	LCP Panel	LP-RPM-4A-230	Adaptive-TE	7, 15	9%	
Lutron	RA2 Select	RRK-R25NE-240	TE	1, 5	17%	(*) limited by dimmer travel
Osram		HTI DALI 315 DIM	TE	1, 15	20%	
Panasonic		WEG575181H	LE	1, 2	NC	Lamps may buzz with LE dimmers
Panasonic		WEG 57813	LE	1, 3, 5	NC	Lamps may buzz with LE dimmers
Philips Dynalite		DGLEDM401	TE	7, 15	16%	Limited by dimmer travel
Philips Dynalite		DGTM402	TE	5, 10	NC	
Rako		RMT500	TE	1, 2, 5, 15	1%	Limited by dimmer travel
RVE		RV5	LE	1, 2	7%	Lamps may buzz with LE dimmers
RVE		RVLED	TE	1, 2	10%	

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Dimmer Manufacturer	Dimmer Series	Dimmer part number	Dimmer mode	Number of lamps tested	Dim (%)	Comments
Trader	Dimpala	DIMR	TE	1, 2	5%	
Trader	Dimpala	DIMPR	TE	1, 2	5%	
Tridonic		DALI-PCD 1-300 one4all	TE	1, 15	NC	
Varilight	V-PRO	JQP401W	TE	1, 2, 5, 10	7%	
Vossloh-Schwabe		553962	TE	1, 2	1%	Limited by dimmer travel
Vossloh-Schwabe		554591 (5-250W)	TE	1, 2, 7, 15	5%	Limited by dimmer travel
Vossloh-Schwabe		554592 (5-500W)	TE	1, 15	5%	Limited by dimmer travel
Vossloh-Schwabe		OneDim	TE	1, 2, 7, 15	1%	Limited by dimmer travel
Yokis		MTV500E	Adaptive-TE	1, 2	11%	
Zano	ZGRIDLED+	ZMC250	Adaptive-TE	1, 2	10%	

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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.

This lamp may emit a low level of audible noise when used with some leading edge dimmers. Testing with the intended dimmer is recommended to ensure acceptable audible levels at the application site.

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

--%	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