

# SORAA

## Electrical compatibility – PAR30S 18.5W 120V lamps - North America

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## General compatibility guidelines

### Scope

This document provides the basic guidelines regards electrical compatibility of SORAA 120V PAR30S 18.5W lamps and compatibility tables.

### Dimmer Compatibility

SORAA 120V PAR30S 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 3-6.

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 lamp will see twice per cycle. This current spike has to be provided by the dimmer, and will affect the recommended lamp 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 dimmers loaded with our 120V lamps.

**For example for a 500W dimmer it would mean  $500/5 = 100W$  of LED, so an estimated maximum of 5 lamps 18.5W.**

### 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 PAR30S 120V 18.5W - DIMMER COMPATIBILITY LIST - North America**

Dimmer manufacturer	Dimmer Model	Dimmer part number	Dimming mode	Dim (%)	Comments
Audacy		SCELV-1000	Reverse phase	9%	(*)
Cooper		DI06P	Forward phase	5%	
Cooper		SLC03P	Forward phase	0%	
Crestron		CLS-C6 CLS-C6M CLS-C6EX CLS-C6MEX CLS-C6MRF CLS-C6RF		NC	Tested by dimmer manufacturer
Crestron		CLS-EXP-DIM		10%	Tested by dimmer manufacturer
Crestron		CLS-EXP-DIMU		1%	Tested by dimmer manufacturer
Crestron		CLX-1DIM4 CLX-1DIM8 CLX-2DIM2 CLX-2DIM8		NC	Tested by dimmer manufacturer
Crestron		CLX-1DELV4		10%	Tested by dimmer manufacturer
Crestron		DIN-1DIM4 DIN-1DIMU4		1%	Tested by dimmer manufacturer
Crestron		CLW-DIMEX-E CLW-DIMEX-P CLW-DIMSWEX-E CLW-DIMSWEX-P P-DIMEX		10%	Tested by dimmer manufacturer
Crestron		GLX-DIM6 GLXX-2DIM8		1%	Tested by dimmer manufacturer
Crestron		CLW-DELVEX-E CLW-DELVEX-P		1%	Tested by dimmer manufacturer
Crestron		CLX-1DIMU4 CLX-2DIMU8		1%	Tested by dimmer manufacturer
Legrand		ADTP703TU	Forward phase	5%	
Leviton		6615-P	Forward phase	12%	
Leviton		6633-P	Forward phase	0%	
Leviton		IPL06	Forward phase	1%	

## SORAA PAR30S 120V 18.5W - DIMMER COMPATIBILITY LIST - North America

Dimmer manufacturer	Dimmer Model	Dimmer part number	Dimming mode	Dim (%)	Comments
Leviton		A2000	Forward phase	5%	Tested by dimmer manufacturer
Leviton		PE400	Reverse phase	1%	Tested by dimmer manufacturer
Leviton		D4206	Forward phase	5%	Tested by dimmer manufacturer
Leviton		I48E	Forward phase	1%	Tested by dimmer manufacturer
Leviton	Lumina	DL6HD	Forward phase	1%	Tested by dimmer manufacturer
Leviton	Illumatech Decora	IPI06-1LZ	Forward phase	1%	Tested by dimmer manufacturer
Leviton	Renoir II	AWSMG-MBW	Forward phase	NC	Tested by dimmer manufacturer
Lightolier		ZP1000	Forward phase	4%	
Lightolier		ZP600	Forward phase	9%	
Lutron	Athena	T-1000	Forward phase	22%	
Lutron	Caseta	PD-5NE	Adaptive - Reverse	14%	(*)
Lutron	Caseta	PD-6WCL	Forward phase	19%	(*)
Lutron	Caseta	PD-10NXD	Forward phase	16%	(*)
Lutron	Contour	CNLV-600P	Forward phase	3%	
Lutron	Contour	CT-603PG	Forward phase	3%	
Lutron	DIVA	DV-600P	Forward phase	9%	
Lutron	DIVA	DVCL-153P	Forward phase	NC	
Lutron	DIVA	DVLV-600P	Forward phase	15%	
Lutron	Glyder	GL 6B38	Forward phase	11%	
Lutron	Glyder	GL-600H	Forward phase	3%	
Lutron	Grafik Eye QS	QSGRJ-3PCE	Forward phase	NC	
Lutron	Grafik Eye QS	QSGRJ-3PCE + PHPM	Reverse phase	2%	
Lutron	Lumea	LGCL-153P	Forward phase	2%	

## SORAA PAR30S 120V 18.5W - DIMMER COMPATIBILITY LIST - North America

Dimmer manufacturer	Dimmer Model	Dimmer part number	Dimming mode	Dim (%)	Comments
Lutron	Maestro	MA-600	Forward phase	NC	
Lutron	Maestro	MACL-153M	Forward phase	NC	
Lutron	Maestro	MAELV-600	Reverse phase	9%	
Lutron	Maestro	MALV-600	Forward phase	NC	
Lutron	Maestro	MAW-600	Forward phase	NC	
Lutron	Nova	NTELV-300	Reverse phase	6%	
Lutron	Nova	NTLV-600	Forward phase	3%	
Lutron	Radio RA2	RRD-10D	Forward phase	16%	
Lutron	Radio RA2	RRD-6NA	Adaptive - Reverse	11%	
Lutron	Rotary	D-603PGH	Forward phase	1%	
Lutron	Skylark	CT-600P	Forward phase	1%	
Lutron	Skylark	CTCL-153P	Forward phase	12%	
Lutron	Skylark	S-600	Forward phase	9%	
Lutron	Skylark	S-603PG	Forward phase	2%	
Lutron	Skylark	SELV-300P	Reverse phase	13%	
Lutron	Skylark	SLV-600P	Forward phase	14%	
Lutron	Spacer	SPSELV-600	Reverse phase	5%	
Lutron	Toggler	TG-600PR	Forward phase	7%	
Lutron	Verti	VTELV-600M	Reverse phase	2%	
Marlin		SMP ELV	Reverse phase	PASS	Tested by dimmer manufacturer
Marlin		Stellar ELV	Reverse phase	PASS	Tested by dimmer manufacturer
Philips (Strand Lighting)	A21	# 74191	Forward phase	5%	Tested by dimmer manufacturer

## SORAA PAR30S 120V 18.5W - DIMMER COMPATIBILITY LIST - North America

### 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 manufacturer for more details and/or reports.

(\*) 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