

ELECTRICAL COMPATIBILITY VIVID & BRILLIANT PAR20 120V NORTH AMERICA

GENERAL COMPATIBILITY GUIDELINES

SCOPE

This document provides the basic guidelines regarding electrical compatibility of SORAA Vivid & Brilliant HL 120V PAR20 lamps and compatibility tables.

DIMMER COMPATIBILITY

SORAA Vivid & Brilliant HL 120V PAR20 lamps are made to work with reverse phase and forward phase dimmers. However, the use of reverse phase dimmers is preferred and will show in general better behavior. Dimmer compatibility tables are available on this document. 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.

TABLE OF CONTENTS

General Compatibility Guidelines.....	1
Dimming Compatibility.....	2-3

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 halogen/incandescent 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 9 lamps 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 the transformer and dimmer manufacturers. For more information on the dimmers/transformers, please find specs on the manufacturer's website.

ELECTRICAL COMPATIBILITY VIVID & BRILLIANT PAR20 120V NORTH AMERICA

Dimmer Manufacturer	Dimmer Family	Dimmer Model	Dimming Phase	Number of Lamps Per Dimmer Tested	Dim (%)	Comments
Cooper	SKYE	SLC03P	Forward	6	10%	
Creston		DIN-1DIMU4	Reverse	3	0%	
ETC		Sensor 3 with D20 Module	N/A	5 (estimated 205 max)	1.26%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
ETC		Sensor 3 with ELV10-S Module	Reverse	5 (estimated 103 max)	0.69%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
ETC		Sensor 3 with LED10 Module (PhaseAdept)	Reverse	5 (estimate 103 max)	0.66%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
ETC		Unison DRd with D20 Module	Forward	5 (estimated 205 max)	0.48%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
ETC		Unison DRd with ELV10 Module	Reverse	5 (estimated 103 max)	1.12%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
ETC		Unison DRd with LED10 (PhaseAdept)	Reverse	5 (estimated 103 max)	3.17%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
ETC		Unison Legacy DR with D20 Module	Forward	5 (estimated 205 max)	23.7%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
ETC		Unison Legacy DR with LED10 (PhaseAdept)	Reverse	5 (estimated 103 max)	51.5%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
ETC		ERP 300W Dimmer	Reverse	5 (estimated 26 max)	0.01%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
ETC		Echo ELVD G-2 600W Dimmer	N/A	5 (estimated 51 max)	1.30%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
ETC		Unison Foundry 600W Dimmer	N/A	5 (estimated 51 max)	1.48%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
Legrand	Radiant	RH703PTU	Reverse	6	9%	
Leviton	Decora	DSL06-1LZ	Forward	6	7%	
Leviton	Illumatech 150	R50-IPL06-10M	Forward	6	5%	
Leviton	Decora Sureslide	R12-06672-1LW	Reverse	6	16%	
Leviton	SureSlide	nr.6674	Forward	6	6%	

ELECTRICAL COMPATIBILITY VIVID & BRILLIANT PAR20 120V NORTH AMERICA

Lutron	Caseta	PD-3PCL	Forward	6	7%
Lutron	Caseta	PD-5NE	Reverse	3	7%
Lutron	Caseta	PD-6WCL	Forward	6	8%
Lutron	Caseta	PD-10NXD	Forward	6	10%
Lutron	Diva	DVCL-153P	Forward	3	5%
Lutron	Diva	DVELV-300P	Reverse	3	4%
Lutron	Diva	DVLV-600P	Forward	3	11%
Lutron	Grafik Eye QS	QSGRJ-3P	Forward	3	1%
Lutron	Homeworks QS	LOSE-4A-120-D	Reverse	1,5	1%
Lutron	Interface	PHPM with Grafik Eye QS	Reverse	3	1%
Lutron	Maestro	MA-600-WH	Forward	6	15%
Lutron	Maestro	MACL-153M	Forward	3	12%
Lutron	Maestro	MAELV-600	Reverse	6	7%
Lutron	Maestro	MALV-600-WH	Forward	6	6%
Lutron	Maestro Wireless	MRF2-6ND-120	Forward	6	3%
Lutron	Maestro Wireless	MRF2-6ELV-120	Reverse	6	5%
Lutron	Maestro Wireless	MRF25-6CL	Forward	6	6%
Lutron	Nova T	NTELV-600	Reverse	6	8%
Lutron	Radio Ra2	RRD-10D	Forward	6	2%
Lutron	Radio Ra2	RRD-6NA	Reverse	3	1%
Lutron	Remote Power Modules / Homeworks	HW / LP-RPM-4A-120	Reverse	3	0%
Lutron	Remote Power Modules / Homeworks	HW / LP-RPM-4U-120	Forward	6	4%
Lutron	Skylark	SLV-600P	Forward	3	9%
Lutron	Skylark	SELV-300P	Reverse	3	4%
Lutron	Skylark Contour	CTCL-153P	Forward	6	6%
Lutron	Toggler	TGCL-153PH-WH	Forward	6	3%
Marlin	SMP ELV Dimmer	600-10-001-00-4	Reverse	3	1%

ELECTRICAL COMPATIBILITY VIVID & BRILLIANT PAR20 120V NORTH AMERICA

Vantage		SDM12-EM	Forward	5	1.2%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
Vantage		ScenePoint	Forward	5	1.0%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
Vantage		UDM-FWD	Forward	5	0.7%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
Vantage		UDM-REV	Reverse	5	1.8%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
Vantage		UDS-F	Forward	5	0.6%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.
Vantage		UDS-R	Reverse	5	1.6%	(*)Tested by dimmer manufacturer, specific reports available for Vivid and Brilliant HL. Please request it.

NOTES:

- Compatibility tests are conducted by Soraa (unless stated otherwise) 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 the dimmer manufacturer.
- Regards compatibility tests conducted by dimmer manufacturer, please contact Soraa or the manufacturer for more details and/or reports.
- This lamp 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.
- (*) 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