

SORAA

Electrical compatibility – Vivid & Healthy MR16-GU10 7.5W 120V lamps - North America

Table of contents

- General compatibility guidelines.....Page 2
- Dimming compatibility.....Page 3-8

General compatibility guidelines

Scope

This document provides the basic guidelines regards electrical compatibility of SORAA 120V MR16 GU10 7.5W lamps and compatibility tables.

Dimmer Compatibility

SORAA 120V MR16 GU10 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 published 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.

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 incandescent/halogen 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 13 lamps 7.5W.

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 the transformer and dimmer manufacturers.

For more information on the dimmers/transformers, please find specs on the manufacturer’s website.

SORAA Vivid & Healthy GU10 120V 7.5W - DIMMER COMPATIBILITY LIST - North America

Manufacturer	Brand	Model	Edge Trigger	Dim (%)	Comments
North America					
Cooper		D106P	Forward	4%	
Cooper		SLC03P	Forward	19%	
Crestron		CLS-C6 CLS-C6M CLS-C6EX CLS-C6MEX CLS-C6MRF CLS-C6RF		1%	Tested by dimmer manufacturer
Crestron		CLS-EXP-DIM		1%	Tested by dimmer manufacturer
Crestron		CLS-EXP-DIMU		3%	Tested by dimmer manufacturer
Crestron		CLX-1DIM4 CLX-1DIM8 CLX-2DIM2 CLX-2DIM8		2%	Tested by dimmer manufacturer
Crestron		CLX-1DELV4		5%	Tested by dimmer manufacturer
Crestron		DIN-1DIM4		1%	Tested by dimmer manufacturer
Crestron		DIN-1DIMU4		3%	Tested by dimmer manufacturer
Crestron		CLW-DIMEX-E CLW-DIMEX-P CLW-DIMSWEX-E CLW-DIMSWEX-P P-DIMEX		2%	Tested by dimmer manufacturer
Crestron		GLX-DIM6 GLXX-2DIM8		1%	Tested by dimmer manufacturer
Crestron		CLW-DELVEX-E CLW-DELVEX-P		5%	Tested by dimmer manufacturer
Crestron		CLX-1DIMU4 CLX-2DIMU8		2%	Tested by dimmer manufacturer

SORAA Vivid & Healthy GU10 120V 7.5W - DIMMER COMPATIBILITY LIST - North America

Manufacturer	Brand	Model	Edge Trigger	Dim (%)	Comments
North America					
ETC	DRd	D20	Forward	24%	(*) Tested by dimmer manufacturer. The lamps shimmer slightly at 24.2% brightness, but are otherwise stable down to 11.0%.
ETC	DRd	ELV10	Reverse	15%	(*) Tested by dimmer manufacturer
ETC	DRd	LED10	Reverse	10%	(*) Tested by dimmer manufacturer
ETC	Echo	ELVD	Reverse	23%	(*) Tested by dimmer manufacturer
ETC	ERP	300W dimmer	Reverse	14%	(*) Tested by dimmer manufacturer
ETC	Legacy Unison	D20	Forward	NC	(*) Tested by dimmer manufacturer
ETC	Legacy Unison	ELV10	Forward	26%	(*) Tested by dimmer manufacturer
ETC	Legacy Unison	LED10	Forward	21%	(*) Tested by dimmer manufacturer
ETC	Sensor 3	D20	Forward	33%	(*) Tested by dimmer manufacturer
ETC	Sensor 3	ELV10-S	Reverse	28%	(*) Tested by dimmer manufacturer
ETC	Sensor 3	LED10	Reverse	15%	(*) Tested by dimmer manufacturer
ETC	Unison	Foundry Dimmer	Reverse	22%	(*) Tested by dimmer manufacturer
Forbes & Lomax		FLR603P	Forward	4%	
Helvar	DigiDim	454	Reverse	14%	
Insteon		2477D	Forward	0%	
Legrand		ADTP703TU	Reverse	18%	
Leviton		6613-P	Forward	12%	

SORAA Vivid & Healthy GU10 120V 7.5W - DIMMER COMPATIBILITY LIST - North America

Manufacturer	Brand	Model	Edge Trigger	Dim (%)	Comments
North America					
Leviton		6615-P	Reverse	20%	
Leviton		6633-P	Forward	10%	
Leviton		IPL06	Forward	2%	
Leviton		A2000	Forward	1%	Tested by dimmer manufacturer
Leviton		PE400	Reverse	5%	Tested by dimmer manufacturer
Leviton		D4206	Forward	1%	Tested by dimmer manufacturer
Leviton		I48E	Forward	1%	Tested by dimmer manufacturer
Leviton	Lumina	DL6HD	Forward	1%	Tested by dimmer manufacturer
Leviton	Illumatech Decora	IPI06-1LZ	Forward	NC	Not suitable for LED
Leviton	Renoir II	AWSMG-MBW	Forward	NC	Tested by dimmer manufacturer
Leviton	Sureslide	R62-06674-P0W		12%	
Leviton	Decora Sureslide	R12-06672-1LW		11%	
Leviton	Illumatech	150 R50-IPL06-10M		8%	
Leviton	Decora	DSL06-1LZ		15%	
Lightolier		ZP1000	Forward	NC	
Lightolier		ZP600	Forward	NC	
Lutron	Athena	T-1000	Forward	NC	
Lutron	Caseta Wireless	PD-5NE-XX	Reverse	7%	
Lutron	Caseta Wireless	PD-6WCL (SD11)	Forward	19%	Tested by dimmer manufacturer. May experience buzzing.
Lutron	Contour	CNLV-600P	Forward	4%	

SORAA Vivid & Healthy GU10 120V 7.5W - DIMMER COMPATIBILITY LIST - North America

Manufacturer	Brand	Model	Edge Trigger	Dim (%)	Comments
North America					
Lutron	Contour	CT-603PG	Forward	4%	
Lutron	Diva	DV-600P	Forward	1%	
Lutron	Diva/ Skylark/ Skylark Contour/ Ariadni/ Toggler/ Lumea	C-L wall-mount dimmers (T1, T4, T5, T8)	Forward	8%	Tested by dimmer manufacturer. May experience buzzing. Performance may vary with dimmers manufactured before 2013
Lutron	Diva	DVLV-600P	Forward	4%	
Lutron	Diva	DVELV-300P	Reverse	3%	
Lutron	Glyder	GL 6B38	Forward	6%	
Lutron	Glyder	GL-600H-DK	Forward	14%	
Lutron	Grafik Eye QS	QSGRJ-3P	Forward	21%	
Lutron	Interface with Grafik Eye QS	QSGRJ+PHPM-PA-DV-WH	Reverse	1%	
Lutron	HomeWorksQS/ myRoom	LQSE-4A1-D/ MQSE-4A1-D/ MQSE-3A1/ MQSE-2A1-D, 120V	Reverse	18%	Tested by dimmer manufacturer.
Lutron	HomeWorks QS	HQRD-6NA	Reverse	15%	Tested by dimmer manufacturer. May experience buzzing.
Lutron	HomeWorks	HxD-6ND	Forward	6%	Tested by dimmer manufacturer. May experience buzzing.
Lutron	Maestro	MA-600	Forward	NC	
Lutron	Maestro	MACL-153M	Forward	7%	
Lutron	Maestro	MAELV-600	Reverse	6%	
Lutron	Maestro	MALV-600	Forward	NC	

SORAA Vivid & Healthy GU10 120V 7.5W - DIMMER COMPATIBILITY LIST - North America

Manufacturer	Brand	Model	Edge Trigger	Dim (%)	Comments
North America					
Lutron	Maestro	MAW-600	Forward	NC	
Lutron	Maestro Wireless	MRF2-6ND-120	Forward	15%	
Lutron	Maestro Wireless	MRF2-6ELV	Reverse	15%	Tested by dimmer manufacturer. May experience buzzing.
Lutron	Nova	NTELV-300	Reverse	5%	
Lutron	Nova	NTLV-600	Forward	4%	
Lutron	Panel Module	LP-RPM-4U-120	Forward	NC	
Lutron	Panel Module	HW/LP-RPM-4A-120	Reverse	12%	Tested by dimmer manufacturer.
Lutron	Panel Module	GP (Harrier) Card. Use load type 2-1.	Forward	14%	Tested by dimmer manufacturer.
Lutron	Radio RA2	RRD-10D	Forward	NC	
Lutron	Radio RA2	RRD-6NA	Reverse	15%	Tested by dimmer manufacturer. May experience buzzing.
Lutron	Rotary	D-603PGH	Forward	23%	
Lutron	Skylark	CT-600P	Forward	2%	
Lutron	Skylark	S-600	Forward	2%	
Lutron	Skylark	S-603PG	Forward	3%	
Lutron	Skylark	SELV-300P	Reverse	6%	
Lutron	Skylark	SLV-600P	Forward	2%	

SORAA Vivid & Healthy GU10 120V 7.5W - DIMMER COMPATIBILITY LIST - North America

Manufacturer	Brand	Model	Edge Trigger	Dim (%)	Comments
North America					
Lutron	Spacer	SPELV-600	Reverse	6%	
Lutron	Stanza	SZ-6ND	Forward	6%	Tested by dimmer manufacturer. May experience buzzing.
Lutron	Toggler	TG-600PR	Forward	6%	
Lutron	Verti	VTELV-600M	Reverse	4%	
Marlin	SMP ELV Dimmer	600-10-001-00-4	Reverse	0%	
Marlin	SMP ELV Dimmer	600-10-001-00-4	Forward	NC	

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.

(*) 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