

# SORAA

## Electrical compatibility – MR16-GU10 7.5W 120V lamps - North America

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## General compatibility guidelines

### Scope

This document provides the basic guidelines regards electrical compatibility of SORAA 120V 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 on pages 3-7.

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 GU10 120V 7.5W - DIMMER COMPATIBILITY LIST - North America**

<b>Manufacturer</b>	<b>Brand</b>	<b>Model</b>	<b>Edge Trigger</b>	<b>Dim (%)</b>	<b>Comments</b>
<b>North America</b>					
<b>Cooper</b>		D106P	L	4%	
<b>Cooper</b>		SLC03P	L	19%	
<b>Crestron</b>		CLS-C6 CLS-C6M CLS-C6EX CLS-C6MEX CLS-C6MRF CLS-C6RF		1%	Tested by dimmer manufacturer
<b>Crestron</b>		CLS-EXP-DIM		1%	Tested by dimmer manufacturer
<b>Crestron</b>		CLS-EXP-DIMU		3%	Tested by dimmer manufacturer
<b>Crestron</b>		CLX-1DIM4 CLX-1DIM8 CLX-2DIM2 CLX-2DIM8		2%	Tested by dimmer manufacturer
<b>Crestron</b>		CLX-1DELV4		5%	Tested by dimmer manufacturer
<b>Crestron</b>		DIN-1DIM4		1%	Tested by dimmer manufacturer
<b>Crestron</b>		DIN-1DIMU4		3%	Tested by dimmer manufacturer
<b>Crestron</b>		CLW-DIMEX-E CLW-DIMEX-P CLW-DIMSWEX-E CLW-DIMSWEX-P P-DIMEX		2%	Tested by dimmer manufacturer
<b>Crestron</b>		GLX-DIM6 GLXX-2DIM8		1%	Tested by dimmer manufacturer
<b>Crestron</b>		CLW-DELVEX-E CLW-DELVEX-P		5%	Tested by dimmer manufacturer
<b>Crestron</b>		CLX-1DIMU4 CLX-2DIMU8		2%	Tested by dimmer manufacturer
<b>ETC</b>		Sensor3, Unison DRd & Legacy, with D20 & ELV10	L and T	NC	Tested by dimmer manufacturer

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<b>North America</b>					
<b>Forbes &amp; Lomax</b>		FLR603P	L	4%	
<b>Helvar</b>	DigiDim	454	T	14%	
<b>Insteon</b>		2477D	L	0%	
<b>Legrand</b>		ADTP703TU	T	18%	
<b>Leviton</b>		6613-P	L	12%	
<b>Leviton</b>		6615-P	T	20%	
<b>Leviton</b>		6633-P	L	10%	
<b>Leviton</b>		IPL06	L	2%	
<b>Leviton</b>		A2000	L	1%	Tested by dimmer manufacturer
<b>Leviton</b>		PE400	T	5%	Tested by dimmer manufacturer
<b>Leviton</b>		D4206	L	1%	Tested by dimmer manufacturer
<b>Leviton</b>		I48E	L	1%	Tested by dimmer manufacturer
<b>Leviton</b>	Lumina	DL6HD	L	1%	Tested by dimmer manufacturer
<b>Leviton</b>	Illumatech Decora	IPI06-1LZ	L	NC	Not suitable for LED
<b>Leviton</b>	Renoir II	AWSMG-MBW	L	NC	Tested by dimmer manufacturer
<b>Leviton</b>	Sureslide	R62-06674-POW		12%	
<b>Leviton</b>	Decora Sureslide	R12-06672-1LW		11%	
<b>Leviton</b>	Illumatech	150 R50-IPL06-10M		8%	
<b>Leviton</b>	Decora	DSL06-1LZ		15%	

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<b>North America</b>					
<b>Lightolier</b>		ZP1000	L	NC	
<b>Lightolier</b>		ZP600	L	NC	
<b>Lutron</b>	Athena	T-1000	L	NC	
<b>Lutron</b>	Caseta	PD-5NE-XX	T	7%	
<b>Lutron</b>	Caseta Wireless	PD-6WCL (SD11)	L	19%	Tested by dimmer manufacturer. May experience buzzing.
<b>Lutron</b>	Contour	CNLV-600P	L	4%	
<b>Lutron</b>	Contour	CT-603PG	L	4%	
<b>Lutron</b>	Diva	DV-600P	L	1%	
<b>Lutron</b>	Diva/ Skylark/ Skylark Contour/ Ariadni/ Toggler/ Lumea	C-L wall-mount dimmers (T1, T4, T5, T8)	L	8%	Tested by dimmer manufacturer. May experience buzzing. Performance may vary with dimmers manufactured before 2013
<b>Lutron</b>	Diva	DVLV-600P	L	4%	
<b>Lutron</b>	Diva	DVELV-300P	T	3%	
<b>Lutron</b>	Glyder	GL 6B38	L	6%	
<b>Lutron</b>	Glyder	GL-600H-DK	L	14%	
<b>Lutron</b>	Grafik Eye	QSGRJ-3P	L	21%	
<b>Lutron</b>	Grafik Eye	QSGRJ+PHPM-PA-DV-WH	T	1%	
<b>Lutron</b>	HomeWorksQS/ myRoom	LQSE-4A1-D/ MQSE-4A1-D/ MQSE-3A1/ MQSE-2A1-D, 120V	T	18%	Tested by dimmer manufacturer.

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<b>North America</b>					
<b>Lutron</b>	HomeWorks QS	HQRD-6NA	T	15%	Tested by dimmer manufacturer. May experience buzzing.
<b>Lutron</b>	HomeWorks	HxD-6ND	L	6%	Tested by dimmer manufacturer. May experience buzzing.
<b>Lutron</b>	Maestro	MA-600	L	NC	
<b>Lutron</b>	Maestro	MACL-153M	L	7%	
<b>Lutron</b>	Maestro	MAELV-600	T	6%	
<b>Lutron</b>	Maestro	MALV-600	L	NC	
<b>Lutron</b>	Maestro	MAW-600	L	NC	
<b>Lutron</b>	Maestro Wireless	MRF2-6ND-120	L	15%	
<b>Lutron</b>	Maestro Wireless	MRF2-6ELV	T	15%	Tested by dimmer manufacturer. May experience buzzing.
<b>Lutron</b>	Nova	NTELV-300	T	5%	
<b>Lutron</b>	Nova	NTLV-600	L	4%	
<b>Lutron</b>	Panel Module	HW/LP-RPM-4A-120	T	12%	Tested by dimmer manufacturer.
Lutron	Panel Module	LP-RPM-4U-120	L	NC	(*)
<b>Lutron</b>	Panel Module	GP (Harrier) Card. Use load type 2-1.	L	14%	Tested by dimmer manufacturer.
<b>Lutron</b>	Radio RA2	RRD-10D	L	NC	
<b>Lutron</b>	Radio RA2	RRD-6NA	T	15%	Tested by dimmer manufacturer. May experience buzzing.
<b>Lutron</b>	Rotary	D-603PGH	L	23%	
<b>Lutron</b>	Skylark	CT-600P	L	2%	
<b>Lutron</b>	Skylark	S-600	L	2%	
<b>Lutron</b>	Skylark	S-603PG	L	3%	
<b>Lutron</b>	Skylark	SELV-300P	T	6%	

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<b>North America</b>					
Lutron	Skylark	SLV-600P	L	2%	
Lutron	Spacer	SPELV-600	T	6%	
Lutron	Stanza	SZ-6ND	L	6%	Tested by dimmer manufacturer. May experience buzzing.
Lutron	Toggler	TG-600PR	L	6%	
Lutron	Verti	VTELV-600M	T	4%	
Marlin	Stellar	RMS 4	T	0%	
Marlin	Stellar	RMS 4	L	NC	

### 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 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