

# SORAA

## Electrical compatibility – MR16-GU10 7.5W 230V lamps – International

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## General compatibility guidelines

### Scope

This document provides the basic guidelines regards electrical compatibility of SORAA 230V MR16 GU10 7.5W lamps and compatibility tables.

### Dimmer Compatibility

SORAA 230V MR16 7.5W GU10 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. Testing with the intended dimmer is recommended to ensure acceptable audible levels at the application site.

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.

--%	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

### 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 230V 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, please find specs on the manufacturer's website.

**SORAA GU10 230V 7.5W - DIMMER COMPATIBILITY - International**

Dimmer Manufacturer	Dimmer Brand	Dimmer Model	Dimming mode	Dim (%)	Note
<b>International</b>					
<b>AURORA</b>		AU-DSP400X	L	18%	Please See Footnote
<b>AURORA</b>		AU-DSP651	L	12%	Please See Footnote
<b>Berker</b>		2830 10	L	1 Lamp: N C 2,3 Lamps: 0%	Please See Footnote
<b>Berker</b>		2861-10	T	NC	
<b>Berker</b>		286710	T	1,2 Lamps: 24% 3 Lamps: 20%	
<b>Bticino</b>		NT4411N	T	17%	(*)
<b>Busch</b>		2247 U	L	8%	Please See Footnote
<b>Busch</b>		2250 U	L	1 Lamp: N C 2,3 Lamps: 6%	Please See Footnote
<b>Busch</b>		6513-102	T	NC	
<b>Busch</b>		6523 U102	L	4%	Please See Footnote
<b>Casambi</b>		CBU-TED	T	1 Lamp 7% 2,3 lamps 3%	
<b>Click</b>		MD9042	L	21%	Please See Footnote
<b>Clipsal</b>		32E450UDM	T	NC	
<b>Clipsal</b>		32ELEDM	T	NC	
<b>Clipsal</b>		L5504D2U	Adaptive - T	NC	(*)
<b>DeltaDore</b>	Tyxia	4840	T	1,2,3 lamps: 19-8%	
<b>DeltaDore</b>	Tyxia	4940	T	8%	
<b>DIGINET</b>		DGLCDM400	T	9%	
<b>Electron</b>		DMR.730	T	0%	
<b>Electron</b>		DMR.731	T	0%	
<b>Elektromeleti</b>		D46	L	NC	Please See Footnote
<b>ELKO</b>		315GLE PH	T	1 Lamp: N C 2,3 Lamps: 13%	
<b>Eltako</b>		EUD12NPN-UC	T	11%	
<b>Eltako</b>		EUD61NPN-UC	T	10%	
<b>FELLER</b>		3314.12.FMI.61	T	NC	
<b>FELLER</b>		40200.LED.FMI.61	T	NC	

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<b>FELLER</b>		40300.RC	T	1 Lamp: N C 2,3 Lamps: 13%	
<b>FELLER</b>		40420.RLC	T	NC	
<b>FELLER</b>		40600.RL	L	13%	Please See Footnote
<b>Fibaro</b>	Dimmer 2	FGD-212	Adaptive T	18%	
<b>GIRA</b>		0307 00 102	T	1 Lamp: 23% 2,3 Lamps: 20%	
<b>GIRA</b>		2262 00 / 100	L	9%	Please See Footnote
<b>GIRA</b>	System 2000	2390 00	L	15%	Please See Footnote
<b>Govena</b>		ProLED225	L	16%	Please See Footnote
<b>Govena</b>		PRO-250-LT-LED	T	25%	Need to adjust maximum level.
<b>Hager</b>		EVN002	T	19%	
<b>HAMILTON</b>		H-LEDSTAT	T	1 Lamp: N C 2,3 Lamps: 13%	
<b>Helvar</b>	Digidim	452 (DALI)	Adaptive T	15%	
<b>Helvar</b>		454 (DALI)	T	16%	
<b>JUNG</b>		1224 LED UDE	T	23%	
<b>JUNG</b>		1271 LED DE	L	20%	Please See Footnote
<b>JUNG</b>		225 NV	L	24%	Please See Footnote
<b>JUNG</b>		225 TDE	T	24%	
<b>JUNG</b>		266 GDE	L	19%	Please See Footnote
<b>Legend Tech</b>		DIMEZE DZ3G450DIAL	T	15%	
<b>Legrand</b>		ref. 572239	T	NC	
<b>Legrand</b>		665114 A 14W3731	L	20%	Please See Footnote
<b>Lunatone</b>	DALI PD	86458619	T	2%	
<b>Lunatone</b>	DALI PD	300 86458619-300	T	3%	
<b>Lutron</b>	Energy Savr Node QS (for Quantum and QS systems)	QSNE-4A-D	T	17%	
<b>Lutron</b>	Energy Savr Node QS (for Quantum and QS systems)	QSNE-4A-D	L	1,2 Lamps: 15% 3 Lamps: 23%	Please See Footnote

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<b>International</b>					
<b>Lutron</b>	Grafik eye QS	QSGR-6PCE	L	NC	Please See Footnote
<b>Lutron</b>	Grafik eye QS	QSGR-6PCE+NGRX-ELVI-CE	T	0%	
<b>Lutron</b>	Homeworks	LQSE-4A-D	T	17%	
<b>Lutron</b>	Homeworks	LQSE-4A-D	L	1,2 Lamps: 15% 3 Lamps: 23%	Please See Footnote
<b>Lutron</b>	LCP128	LP-RPM-4A-230	T	19%	(*)
<b>Lutron</b>	LCP128	LP-RPM-4U-240	L	NC	Please See Footnote
<b>Lutron</b>	LYNEO	LSSI-501	L	1,2 Lamps: 9% 3 Lamps: NC	Please See Footnote
<b>Lutron</b>	RANIA	RNDU-252B-FAW-M	T	NC	
<b>Lutron</b>	RANIA	RNSU-452B-FAW-M	T	NC	
<b>Maintronic</b>		DAD1200	T	NC	
<b>MARBO</b>	Crabtree	DV21912	L	16%	Please See Footnote
<b>Merten</b>	SBD400R-1	MEG5131-0000	L	15%	Please See Footnote
<b>Merten</b>	SBD600RL	MEG5133-0000	L	9%	Please See Footnote
<b>Merten</b>	SBD315RC	MEG5136-0000	T	1 Lamp: N C 2,3 Lamps: 13%	
<b>MK</b>	K1501 WHILV	47543SL	L	1 Lamp: N C 2,3 Lamps: 20%	Please See Footnote
<b>MK</b>	K1511 WHILV	524675L	L	1 Lamp: N C 2,3 Lamps: 7%	Please See Footnote
<b>MK</b>	K1522 WHILV	43395PL	L	NC	Please See Footnote
<b>MK</b>	K1523WHILV	52470SL	L	19%	Please See Footnote
<b>MK</b>	K1526WHI	50067778	L	27%	Please See Footnote
<b>Mode Lighting</b>	Evolution	EVO-SGP	L	NC	Please See Footnote
<b>Mode Lighting</b>	Mirage	MP-10-01	L	NC	Please See Footnote
<b>Mode Lighting</b>	Mirage / Tiger / Evolution	TRAILING EDGE CARD	T	0%	
<b>Osram</b>		HTI DALI 315 DIM	T	16%	(*)
<b>Panasonic</b>		WEG57813	L	6%	Please See Footnote
<b>Philips</b>	Dynalite	DGLM402	L	NC	Please See Footnote
<b>Philips</b>	Dynalite	DGTM402	T	24%	(*)
<b>Philips</b>	Dynalite	DGLED401	T	20%	

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<b>International</b>					
<b>Rako</b>		RDT500 with control RCP07-W	T	0%	
<b>Rako</b>		RMT500 with control RCP07-W	T	0%	
<b>RVE</b>		RV5	L	18%	Please See Footnote
<b>RVE</b>		RVLED	T	13%	
<b>Schneider</b>		GD1G2W4	L	18%	Please See Footnote
<b>Schneider</b>		SBD315RC	T	1 Lamp: N C 2,3 Lamps: 11%	
<b>Schneider</b>		REG-K/2x230/300W	T	NC	
<b>Shuttle</b>		SDIM-T-LED-125W	T	1 lamp: 21% 2,3 lamps: 9%	
<b>Siemens</b>		5TC8 263	L	16%	Please See Footnote
<b>Tridonic</b>		DALI-PCD 1-300 one4all	Adaptive-T	24%	
<b>VADSBO</b>		LD220	T	2%	
<b>Varilight</b>		HQ7W 120W	L	19%	Please See Footnote
<b>Varilight</b>		IQP401W	L	NC	Please See Footnote
<b>Varilight</b>	V-PRO	JQP401W	T	3%	
<b>Vossloh-Schwabe</b>		Art. No. 554591 (5W to 250W)	T	0%	
<b>Vossloh-Schwabe</b>		Dim One	T	14%	
<b>Yokis</b>		MTV500E	Adaptive T	1 lamp: N C 2,3 lamps 12%	
<b>Zano</b>		WH400	L	17%	Please See Footnote
<b>Zano</b>		ZGRIDLED	T	NC	

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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.

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 Revision 18Q4