

## ELECTRICAL COMPATIBILITY VIVID 230V MR16-GU10 7.5W LAMPS INTERNATIONAL

### GENERAL COMPATIBILITY GUIDELINES

#### SCOPE

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

#### DIMMER COMPATIBILITY

SORAA VIVID 230V MR16 7.5W GU10 lamps are made to work with trailing edge and leading edge 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. 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. The tested number of lamps is not necessarily the maximum amount of lamps that dimmer can handle, it is just the number of lamps that was tested at our lab.

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#### 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/transformers, please find specs on the manufacturer's website.

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Dimmer Manufacturer	Dimmer Family	Dimmer Model	Dimming Phase	Number of Lamps Per Dimmer Tested	Dim (%)	Comments
<b>BERKER</b>		nr. 296110	Trailing	1 10	3% 1.4%	(*) Select RC mode Limited by dimmer travel
<b>DINUY</b>		RE PLA LE1	Trailing	1-10	0.2%	(*) Limited by dimmer travel Select mode "LED2"
<b>iLight</b>		SCI dimmer	Leading	1-5 (max estimated 35)	0%	(*) Tested by dimmer manufacturer
<b>iLight</b>		SCMA dimmer	Trailing	1-5 (max estimated 40)	0%	(*) Tested by dimmer manufacturer
<b>iolloi</b>		ID-EU20FW03	Trailing	10	0.08%	(*) Limited by dimmer travel
<b>iolloi</b>	Wifi dimmer	ID-D688-WF	Trailing	10	0%	(*) Select RC mode
<b>Jung</b>		1730DD	Trailing (auto)	10	2%	(*) Limited by dimmer travel
<b>Lunatone</b>	DALI to trailing edge	Art.Nr.: 86458619	Trailing	1-3 (max)	1%	Limited by dimmer travel
<b>Lunatone</b>	DALI to trailing edge	Art.Nr.: 86458619-300	Trailing	10	1%	Limited by dimmer travel
<b>Lutron</b>	Homeworks QS / Energi Savr Node QS	LQSE-4A-D (Gen 2) QSNE-4A-D (Gen 2)	Trailing	1-33 per zone	1%	Tested by dimmer manufacturer
<b>Lutron</b>	Homeworks QS	HQRK-R25NE-240 HQRM-R25NE-240 HQRQR25NE-240 HQRN-R25NE-240	Trailing	1-20	3%	Tested by dimmer manufacturer
<b>Lutron</b>	HomeWorksQS/ myRoom	LQSE-4A1-D MQSE-4A1-D MQSE-3A1 MQSE-2A1-D	Trailing	1-15 per zone	1%	Tested by dimmer manufacturer
<b>Lutron</b>	Homeworks	HQRx-P20-240y	Trailing	1-20	3%	Tested by dimmer manufacturer
<b>Lutron</b>	RA2 select	RRK-R25NE-240 RRM-R25NE-240 RRQ-R25NE-240 RRN-R25NE-240	Trailing	1-20	3%	Tested by dimmer manufacturer

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<b>Lutron</b>	RA2 select	RRx-P20-240y	Trailing	1-20	3%	Tested by dimmer manufacturer
<b>Lutron</b>	Energi Savr Node DIN-Rail (240 V PRO LED+ Phase Adaptive)	QSNE-4A5-230-D	Trailing	Zone 1: 1-40 Zone 2-4: 1-30 per zone	1%	Tested by dimmer manufacturer
<b>Lutron</b>	HomeWorks DIN-Rail Power-Module (240 V PRO LED+Phase Adaptive)	LQSE-4A5-230-D	Trailing	Zone 1: 1-40 Zone 2-4: 1-30 per zone	1%	Tested by dimmer manufacturer
<b>Lutron</b>	Vive	RMKS-250NE RMMS-250NE RMQS-250NE RMNS-250NE	Trailing	1-20	3%	Tested by dimmer manufacturer
<b>Noxion</b>	LED cord dimmer	RLC 0-50W 220-240V	Auto (trailing)	1	0%	
<b>Varilight</b>	V-PRO	JQP401W	Trailing	5	0%	Select Mode 1.

### 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.

<b>--%</b>	Dims to <20% (of the measured light output)
<b>--%</b>	Dims to 20-30% (of the measured light output)
<b>NC</b>	Not compatible (or dims to >30%)
<b>Blank cell</b>	Not tested