

# SORAA

## Electrical compatibility – MR16-GU10 & E11 100V 7.5W lamps – Japan

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## General compatibility guidelines

### Scope

This document provides the basic guidelines regards electrical compatibility of SORAA 100V MR16 7.5W E11 and GU10 lamps and compatibility tables.

### Dimmer Compatibility

SORAA 100V MR16 7.5W E11 and 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 3-5.

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 dimmers loaded with our 100V 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 E11 100V 7.5W - DIMMER COMPATIBILITY LIST - Japan

Manufacturer	Brand	Model	Edge Trigger	Dim (%)	Comments
<b>Japan</b>					
DAIKO		DP-34402F (*)		17%	
DAIKO		DP-34406F		NC	
DAIKO		DP-37154E		1 lamp: NC >1 lamp: 8%	
DAIKO		LZA-90306E	L	1 lamp: 24% 2, 3 lamps: 3%	
ENDO		X-207W (*)	L	1, 2 lamps: NC 3 lamps: 13%	
ENDO		RX116WC (*)	L	1 lamp: 29% >1 lamp: 4%	
HELVAR	Digidim	458	L	0%	
JIMBO (神保電器)		NKW-LC10N3		1 lamp: 11% >1 lamp: 5%	
JIMBO (神保電器)		NKW-LC10N3G		1 lamp: NC 2 lamps: 21% 3 lamps: 3%	
JIMBO (神保電器)		WJ-RL5N		1 lamp: 13% 2 lamps: 6% 3 lamps: 3%	
KOIZUMI		AE36745E (*)	L	8%	
LUTRON	Diva	DVCL-123P	L	NC	
LUTRON	Grafik Eye QS	Grafik Eye QS + PHPM-PA	T	2%	
LUTRON		HWD-4NE-JA	T	NC	
LUTRON	Skylark	S-503P-JA	L	14%	
MAXRAY		OPO1230-04	L	2%	
MAXRAY		OP0734-04		4%	
MAXRAY		OP0735-04		NC	
ODELIC		LC 211	L	1%	

## SORAA E11 100V 7.5W - DIMMER COMPATIBILITY LIST - Japan

Manufacturer	Brand	Model	Edge Trigger	Dim (%)	Comments
Japan					
PANASONIC		NQ20203T		1, 2 lamps: NC 3 lamps: 29%	
PANASONIC		NQ20345	L	14%	
PANASONIC		WN57512		1%	
PANASONIC		WN575159		NC	
PANASONIC		WN575215K		1, 2 lamps: NC 3 lamps: 12%	
PANASONIC		WN575259	L	21%	
PANASONIC		WT57511W		5%	
PANASONIC		WT57515WK		1, 2 lamps: NC 3 lamps: 29%	
PANASONIC		WTC57521W		13%	
PANASONIC		WTC57525WK		NC	
PANASONIC		WTC575251		NC	
PANASONIC		WTC57523W		14%	
PANASONIC		WTC57528WK		1 lamp: NC 2 lamps: 26% 3 lamps: 8%	
TES LIGHTING		TLC-0003		1 lamp: NC >1 lamp: 3%	
TOYOSTAR		TRD-100ULHE		2%	
TOYOSTAR		TRD-100ULHH (*)		1, 2 lamps: 7% 3 lamps: 4%	

## SORAA E11 100V 7.5W - DIMMER COMPATIBILITY LIST - Japan

### 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 the manufacturer for more details and/or reports.

(\*) Test results with this dimmer added to the compatibility list as of Revision 17Q3

--%	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