

SORAA

Electrical compatibility – PAR20 11W 120V lamps - Japan

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General compatibility guidelines

Scope

This document provides the basic guidelines regards electrical compatibility of SORAA 100V PAR20 11W lamps and compatibility tables.

Dimmer Compatibility

SORAA 100v PAR20 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 3-4.

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 120v lamps.

For example for a 500W dimmer it would mean $500/5 = 100W$ of LED, so an estimated maximum of 9 lamps 11W.

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 PAR20 100V 10.8W - DIMMER COMPATIBILITY LIST - Japan

Manufacturer	Model	MD #	Edge Trigger	Dim (%)	Comments
DAIKO		LZA-90306E	L	17%	
KOIZUMI		AE36745E	L	1%	
LUTRON	Diva	DVCL-123P-JA	L	1%	
LUTRON	Grafik Eye QS	Grafik Eye QS + PHPM-PA	T	1%	
LUTRON		HWD-4NE-JA	T	NC	
LUTRON	Skylark	S-503P-JA	L	16%	
MAXRAY		OPO 1230-04	L	2%	
ODELIC		LC 211	L	9%	
PANASONIC		WN575259	L	4%	
PANASONIC		NQ20345	L	1%	

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Notes:

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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.

(*) 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