



Avici Integrated LED Lighting System  
120/240/277v

Owner's Manual  
22 October, 2018



Congratulations on your new Avici Integrated LED Lighting System! Avici combines an array of top-bin Osram LEDs with our custom-designed drivers for one amazing, spectrum-tunable, computer-controlled grow lighting system. We hope you dig it the most.

This manual will tell you to to hang, connect and operate your new Avici.

### The Box Contains

- Avici Integrated LED Lighting System
- Power Cord (NEMA 6-15P)
- Two (2) RJ-14 Data Cables
- RJ-14 Dual Splitter
- Two custom wire light hangers



### Blinking LEDs - What Your Avici Is Telling You

#### Blinks Once A Second - Over Temperature or Fan Failure

If the Avici internal heatsink reaches a programmed over temperature point, it's way too hot and she will shut off with the OFF LED blinking on and off once a second. Once the internal temperature cools to 10 degrees below the over temp point, Avici will automatically restart.

#### Blinks Four Times A Second - Over Voltage / Under Voltage

If supplied power is outside safe operating range for the Avici, the LED will flash fast to let you know the fixture is working, but not going to come on.

If the OFF LED is flashing fast you can either remove and reapply power, but best to check the electrical supply first. Incorrect supply voltage can destroy the fixture.

#### Flickers Briefly Once a Second - External Control

The RLC1 Digital Lighting Controller and TouchMi Room Controller can control 512 Revolution lights in two zones. You can set on and off times, sunrise and sunset ramps, dimming with temperature and over temperature shutdown for each zone for lights that support these commands. Avici also accepts commands for color mixing for custom spectra. Please see the RLC1 and TouchMi manuals for details on controlling the output spectrum of your Avici.

When the provided RJ-14 phone cable is plugged into the Avici and a Revolution controller, the front panel LED will blink off, very briefly, once a second to show you that Avici is controlled by an outside source and that communication is up and running.

If the cable becomes disconnected, or the controller stops working, Avici will return to whatever power level and spectrum was last selected - just as you would expect.

### Fans?

Avici has four (4) fans to keep the LED chips cool. While rated to run at 85C, the Osram chips in the Avici only run about 55C for long life. Fans come on at power up to let you know they are working, and adjust speed as needed to maintain temperature. At full power, the fans run all the time. At reduced power, fan speed will be reduced proportionately.

At power up, the fans come on briefly just to let you know they're working.

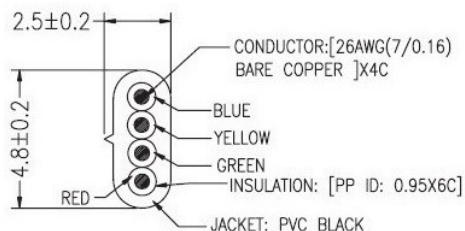
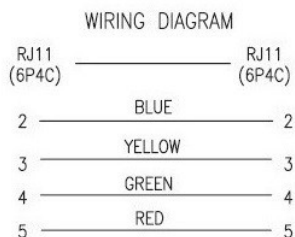
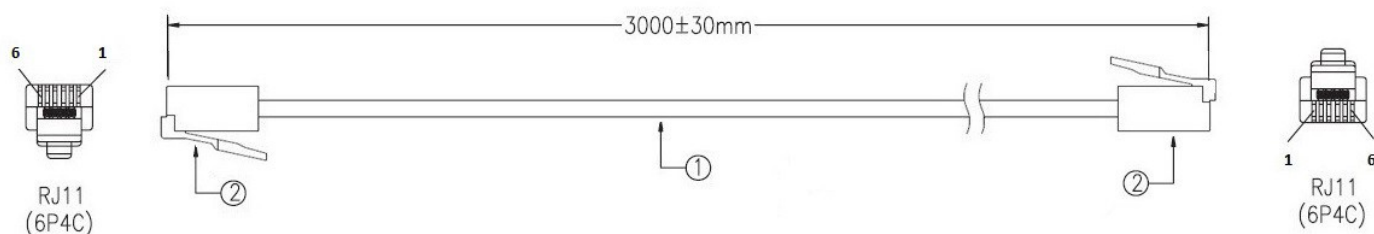
## Power Cables

Avici LED lights have a wide-input power supply of 120/240/277 volts, and can be ordered with various power cords as noted below.

| Part Number                         | Where Used   | Looks Like ...   |
|-------------------------------------|--|--|
| AVICI1150W-US120<br>Plug: NEMA5-15P | USA, Canada  |  A black NEMA 5-15P plug with two flat parallel blades and a ground pin, shown next to a white NEMA 5-15P outlet.                     |
| AVICI1150W-US240<br>Plug: NEMA6-15P | USA, Canada<br><b>THIS IS THE STANDARD CORD</b>  |  A black NEMA 6-15P plug with two flat parallel blades and a round ground pin.  |
| AVICI1150W-AUS                      | Australia, New Zealand, China, Argentina   |  A black Type I plug with two slanted blades and a round ground pin, shown next to a white Type I outlet.                            |
| AVICI1150W-UK                       | UK, Ireland, Singapore   |  A black Type G plug with three rectangular blades (two flat, one red) and a round ground pin, shown next to a white Type G outlet. |
| AVICI1150W-EURO                     | Europe (except UK)   |  A black Type C/F plug with two round pins and a round ground pin, shown next to a white Type C/F outlet.                           |
| AVICI1150W-277<br>Plug: NEMA L7-15P | USA, Canada, Europe<br><br>These are available by special order for projects that require a locking connector. |  A black NEMA L7-15P locking plug with two flat parallel blades and a round ground pin, featuring a locking collar.                 |

## Data Cables and Connections

These are the data cables we supply. If you get longer or different ones, make sure they are wired like this.



CABLE CONFIGURATION

|      |           |  |      |        |
|------|-----------|--|------|--------|
| ②    | PLUG      | RJ11 PLUG 6P4C INSULATION PC CLEAR GOLD PLATED     | 2    |        |
| ①    | CABLE     | UL20251,26AWG*4C(7/0.16BC) PVC JACKET COLOR: BLACK | AS   |        |
| ITEM | PART NAME | DESCRIPTION  | Q'TY | REMARK |

Look at the cable ends in the pic to the right and you'll see the wires are the same by color, pin 1 to 1, pin 2 to 2, etc. on each connector.

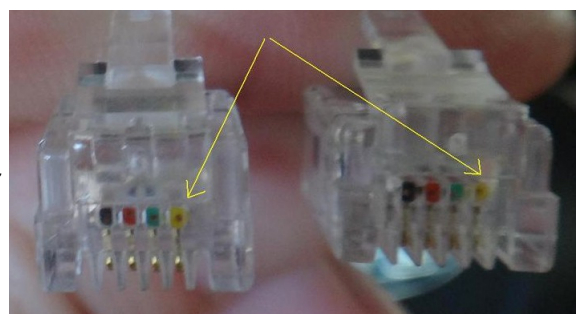
RevMicro has the right cables of all sizes should you need them, or <http://digikey.com> is a good source in the USA.

We have tested and recommend these cables:

Digikey Part Number A2662R-07-ND, 7' long.

Digikey Part Number A2662R-25-ND, 25' long.

<https://www.digikey.com/>



## Technical Specifications

|                                 |   |
|---------------------------------|---|
| Input Voltage                   | 120/240/277 volts AC, 50/60 Hz  |
| Input Current                   | 9.04 amperes @ 120 volts , 4.6 amperes @ 240 volts , 4.15 amperes @ 277 volts         |
| Input Power Plug                | NEMA 6-15P (240v USA is standard)   |
| System efficiency               | 88.6 % @ 277 volts  |
| Driver efficiency at full power | 84.39% @120 volts , 86.22% @240 volts , 88.6% @277 volts                              |
| Power factor                    | 0.99 @ 120 volts , 0.98 @ 240 volts , 0.96 @ 277 volts                                |
| Light Source                    | Osram OSOLON LED array  |
| Reported L70                    | > 54,000 hours  |
| Fan MTBF                        | > 64,000 hours  |
| Luminous Flux                   | 2300 uMole/sec dimmable in 255 steps  |
| External Dim                    | Revolution or Revolution-compatible controller  |
| External Dim Connector          | RJ14 telephone interconnect type (6P4C)   |
| Internal Dim                    | N/A   |
| Output power                    | 0 – 1150w   |
| Dimming / Spectrum Control      | External controller   |
| Certifications                  | Certified to FCC Part 18<br>CSA Certified<br>CE Certified<br>RoHS and RoHS2 Certified |
| Dimensions                      | 435mm x 528mm x 121.6mm (about 17 x 21 x 5 inches)<br>15.0 kg (about 32 pounds)       |

## FCC Compliance Statement

**Avici**

**120/240/277 1150W**

FCC ID: 2AH86-AVICI1150W

The Avici Integrated LED Lighting System has been tested at FCC-certified laboratories in the United States and conforms to FCC's Part 18B Consumer standard for Industrial, Scientific, and Medical Equipment for both conducted and radiated emissions.

Given that all electronic equipment emits some RF energy, please note that compliance with these standards does not mean a zero level of emission, only a very low level of emission. The FCC requires that we also state:

*This product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45-30 MHz.*

*This device complies with Part 18 of the FCC Rules.*

Changes or modifications not expressly approved by Revolution Microelectronics could void the user's authority to operate the equipment.