

Individual Fixture Adaptor (IFAC)



- 1) 110 to 277v AC
- 2) Works with any 1-10v driver
- 3) Avi-on Direct Connect™ Sensor compatible
- 4) External antenna available
- 5) Energy data compatible

Low Voltage Fixture Adaptor Family (LVFA)



- 1) 12 to 24v DC
- 2) Works with any 0-10v dim-to-off driver (if driver is not 0-10v, please use IFAC at left)
- 3) Avi-on Direct Connect™ Sensor compatible
- 4) External antenna available

Step 1) Peel & place Avi-on QR code sticker on outside of fixture
Onsite fixture installers will scan the Avi-on QR codes to quickly add individual fixtures to zones

Locate large QR Code sticker on
Avi-on device

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LVFA



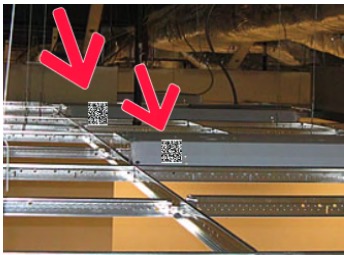
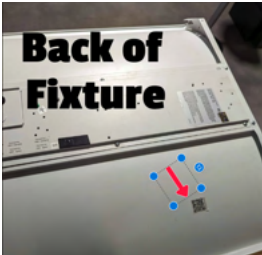
IFAC



Remove QR Code sticker from Avi-on
LVFA or IFAC where it says “peel here”



Place the QR Code sticker on the fixture in a
location where it will be visible to the installer
Top (back) of the fixture is usually best



Step 2) Assemble fixture, driver, controller, and any sensors or external antennas

Step 2a) Install the Avi-on controller

IFAC Assembly

- 1) Take the Line power and insert it into the AC Line In on the IFAC. Insert the Neutral into the connector marked AC Neutral
- 2) Use the IFAC output marked Driver Line and connect this to the driver line input. Use the IFAC output marked Driver Neutral and connect this to the driver neutral input
- 3) Wire the dimming lines per guidelines below
- 4) Install any integrated sensors
- 5) Secure the IFAC inside the fixture

[Install IFAC Warm/Cool](#)



[Direct Connect Sensors](#)



[Install IFAC CCT](#)



LVFA Assembly

- 1) The Avi-on Low Voltage Fixture Adaptors (LVFA) require a 0-10v dim-to-off-driver
 - a) DO NOT RELY ON THE FIXTURE LABEL. Verify your driver is dim-to-off by watching the video below
- 2) Two options for powering the 12v-24v DC LVFA
 - a) Power off the driver’s 12-24v auxiliary output
 - b) Add a 12v auxiliary power supply AVI-PS-277-12-250
- 3) Wire the dimming lines per instructions below
- 4) Install any integrated sensors
- 5) Secure the LVFA inside the fixture

[LVFA Wiring](#)



[Install LVFA](#)



[Test LVFA Dim-to-Off](#)



[Direct Connect Sensors](#)



Install Dimming Lines

CCT: Single driver with separate color and dimming inputs:

- Connect the dimming lines to Channel 1 (purple (+), grey (-) and the color channel (wire colors may vary by driver) to Channel 2.

Warm/Cool: Two drivers controlling each color string individually:

- Connect the WARM string to Channel 1 and the COOL string to Channel 2

Note: CCT and Warm/Cool require different device firmware. Be sure to specify the driver type on your order

Step 2c) For both IFAC and LVFAs: Position any external or outdoor antennas carefully

If your Avi-on controller has an external antenna, position the antenna for best reception [Antenna Placement Video](#)

1) Place the antenna and Avi-on Load Controller at least 3 to 4 inches away from the LED driver

2) If possible, “float” the antenna in the fixture near vents or slots in the fixture

- DO NOT pinch the antenna between the Avi-on controller and the LED driver or the side wall
- Do not cut, bend, or remove the antenna

3) If the Avi-on device is being placed inside a metal case, follow these requirements

- IFAC: please thread the external antenna out of a vent
- If the fixture has an especially thick metal case, it may require both an extended cable and a longer antenna to place it outside the case. *Contact ProSales@avi-on.com for extended cable and antenna options*

4) Outdoor fixtures always require an externally mounted antenna. See separate instructions for details



[Internal Antenna Placement Guidelines](#) → 

[External/Outdoor Antenna Placement Guidelines](#) → 

STOP

Are the Avi-on QR Code Stickers on the outside of the fixtures? If not, peel/stick before continuing

STOP

Step 3) EOL (End-of-Line) Assembly Testing

Step 3a) LVFA ONLY: Re-qualify the shipment of fixtures + drivers for 0-10v Dim-to-Off

- See *Qualifying 0-10v Drivers for use with LVFAs*

Step 3b) Double Tap Color Dimming Test

Perform this test on EACH fixture to verify correct wiring and power:

Double tapping the button on the IFAC, LVFA, or XFAC on a two channel device will perform the following wiring validation tests:

CCT Firmware: If you have **one LED driver** that has two channels of input and two channels of output, then your Avi-on device should have been specified with 2-channel CCT firmware, where Ch1 is luminance and Ch2 is color temperature. The test will first run the fixture through the dimming range and then the color range.

W/C (Warm/Cool) Firmware: If you have **two LED drivers** (first for cool LED strip and a second for warm LED strip) then your Avi-on device should have been specified with 2-channel W/C (warm/cool) firmware. Channel one is for the warm color and Channel two is for cool. The test will first run the fixture through the warm channel range and then through the cool channel range.

Fixture not working? Check that all connections are secure Check that the purple & gray wires are not swapped and the channels are connected correctly	Choppy dimming with LVFA? Add 12v auxiliary power source AVI-PS-277-12-250	Fixture or driver not dimming-to-OFF on BOTH ends of the color spectrum? Color not up to expectations? Verify the driver is 0.1% minimum dim capable –and/or– Choose different driver or fixture
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Step 5) FOR MANUFACTURERS: Include Avi-on documentation with outgoing shipment

- Please **PRINT AND SHIP** the *Avi-on Project Startup Documents shown below* with outbound shipment
- If devices were **pre-claimed (setup)**...include location information and grant access to location

[Project Manager's Checklist](#) 

[Account & Location Manager Overview](#) 

[Electrician's Checklist](#) 

[ZoneScanner Tool Cue Card](#) 

Qualified Large Scale Fixture Manufacturers

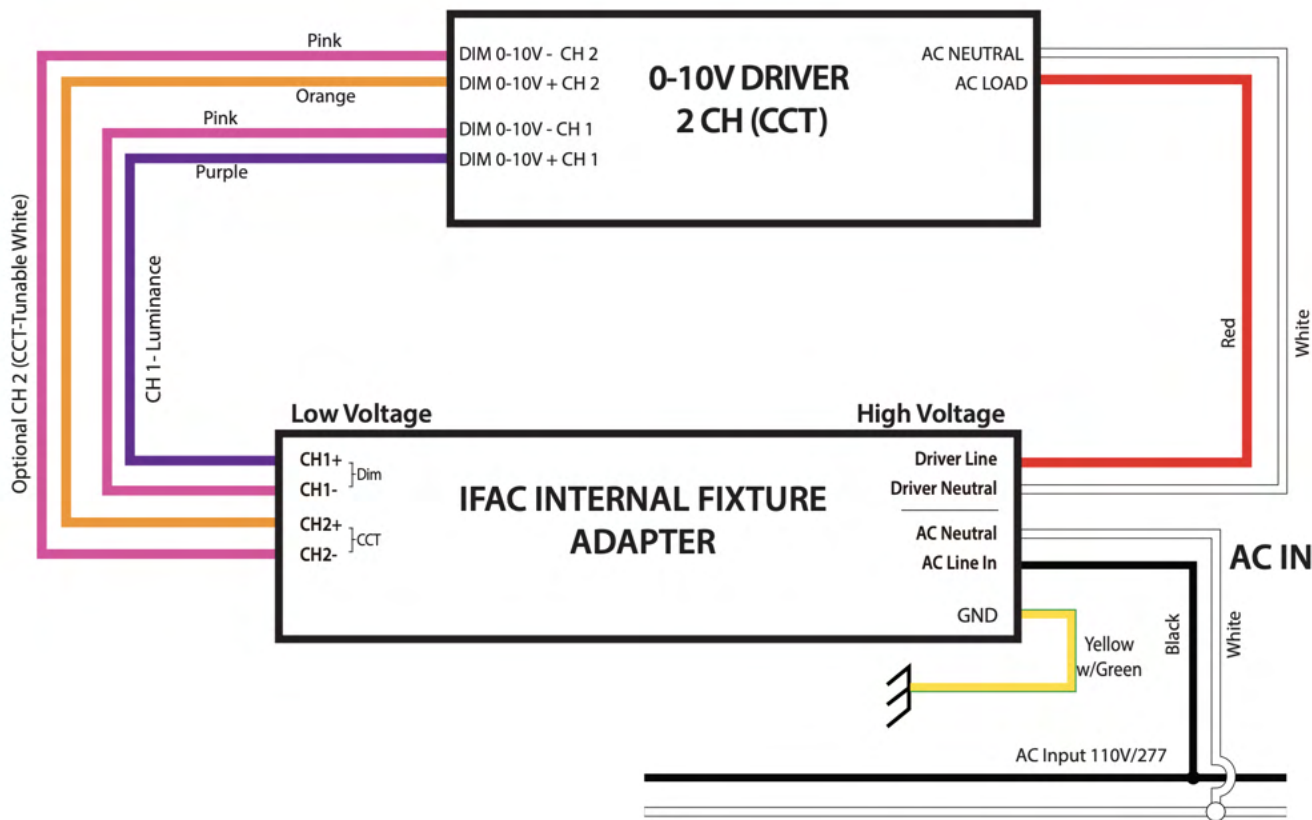
Processing large numbers of fixtures or want to test the fixture after full assembly? Your company may qualify for an end-of-line automated test rig. Contact Avi-on at [Avi-on.com/Contact](https://avi-on.com/Contact) with the project name, description of your fixture, and application. Avi-on devices have Bluetooth commands that can trigger the above tests without claiming the device to a location

Selected Wiring Diagrams



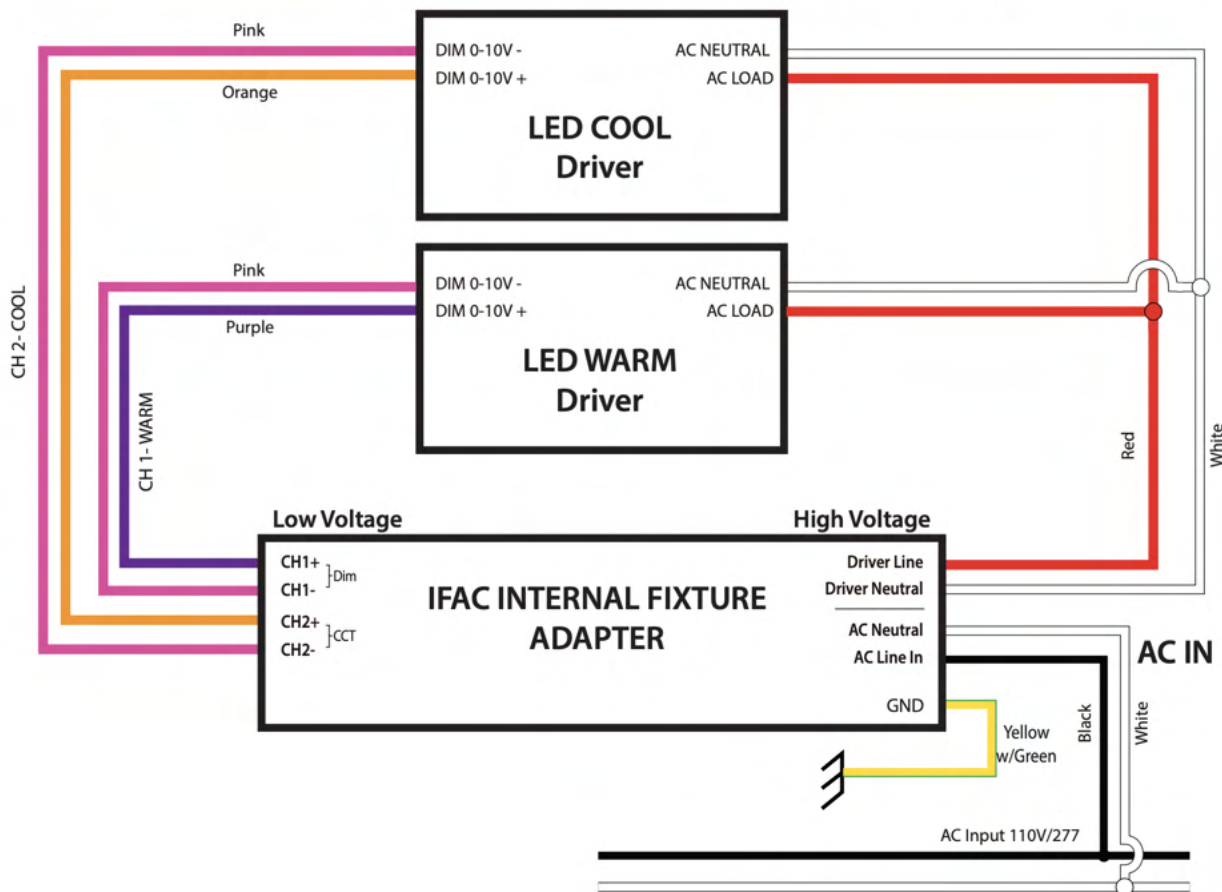
IFAC Wiring Diagram
2 Channel (CCT) integration with Power Supply

AVI-IFAC-5A-2CH



IFAC Wiring Diagram
2 Channel (Warm/Cool) integration with Power Supply

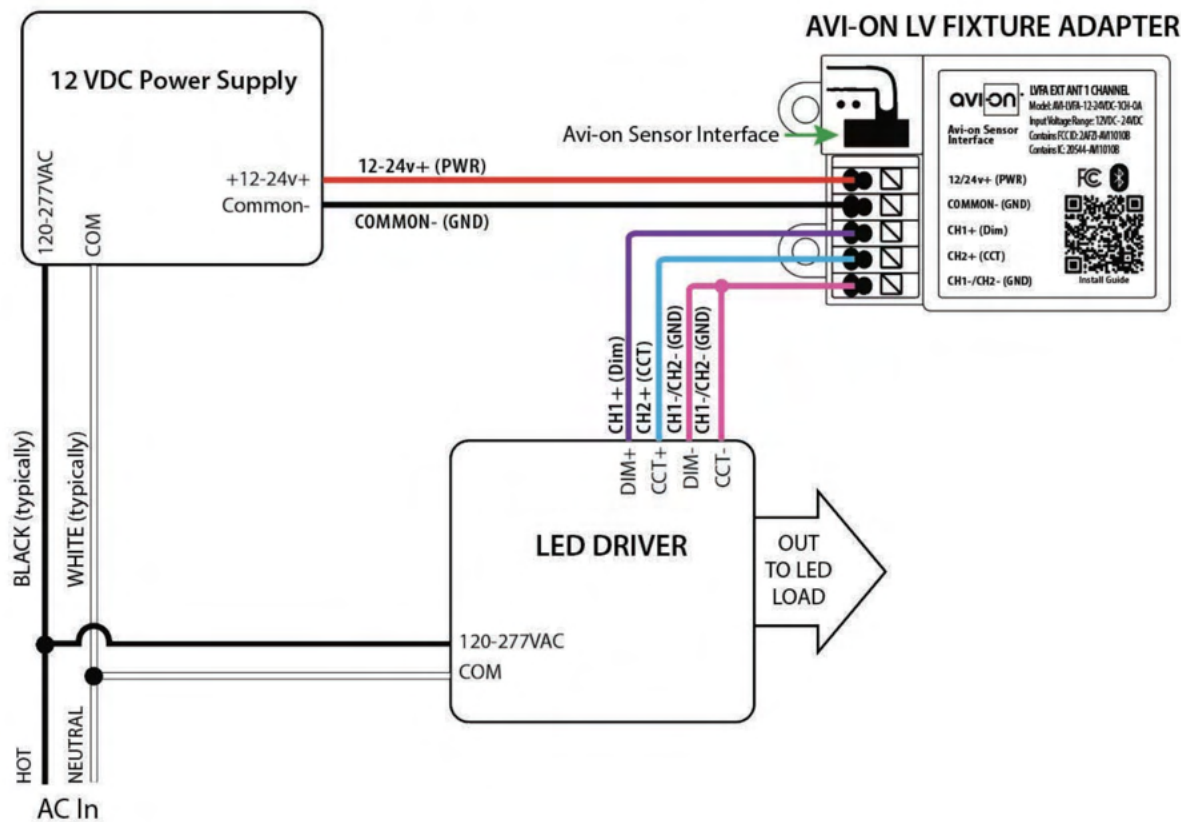
AVI-IFAC-5A-2CH



LVFA Wiring Diagram

Dual Channel with Power Supply

AVI-LVFA-12-24VDC-2CH



XPP Wiring Diagram

Avi-on XPP Class 2 Circuit-Level Load Controller

AVI-XFAC-16A-1CH-CL2

