



# TOKISTAR LIGHTING INSTRUCTION MANUAL

## Advantage XF Series

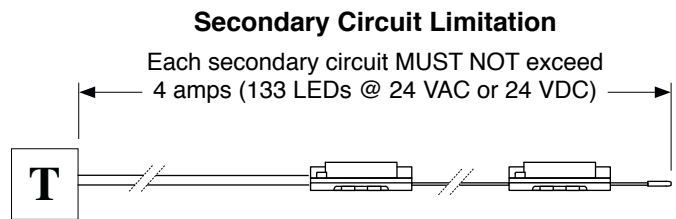
### General Description

Tokistar's Advantage XF Series can be operated at 24 VAC or 24 VDC. The system uses LED modules rated at 0.72 watts. Each fixture is labeled with wattage and operating voltage.

Light Source	
Description	Part No.
0.72 Watt LED	AVXF-WW
0.72 Watt LED	AVXF-IW

### Class 2 / 24 VAC or 24 VDC operation Secondary Circuit Limitation

The maximum load of each fixture must not exceed 96 Watts (4 amps @ 24 Volts).



This chart gives recommended maximum lengths. Conforming to these lengths will ensure no fixture exceeds 96 Watts, and will not be subjected to excessive voltage drop.

	0.72 Watt/LVWW	0.72 Watt/LIW
Maximum Lamps/Circuit	133 LEDs	133 LEDs
Lamp Spacing	Maximum Run Lengths	
2.4" O.C. (60 mm)	26' (8 M)	26' (8 M)
3" O.C. (75 mm)	32' (10 M)	32' (10 M)
4" O.C. (100 mm)	43' 6" (13.3 M)	43' 6" (13.3 M)

### PRECAUTIONS

1. Read all instructions completely before beginning installation.
2. Turn off electricity before beginning installation.
3. All wiring is to be performed by a qualified electrician.
4. Installation must comply with the National Electrical Code, and all applicable codes.
5. Turn main supply to transformer on only after all connections are made and tested.
6. Use only Class 2 transformers or LED Drivers provided by Tokistar with the system.

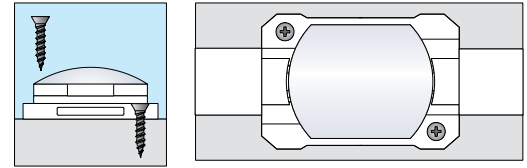
### TOKISTAR LIGHTING

1015 E. Discovery Lane  
 Anaheim, CA 92801  
 TEL: 714 772 7005 FAX: 714 772 7014  
 email: info@tokistar.com Website: tokistar.com

## Step 1: Mounting Fixtures

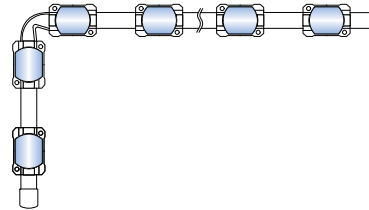
### Option 1 - Direct Screw Mounting (Part# AV-MS)

Each LED socket has two mounting holes in opposing corners designed to accept screws. For secure mounting, two screws must be used. Sockets must be firmly attached to support the weight of the fixture.



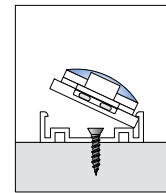
### Seamless Light

Advantage FX fixtures are flexible enough to turn corners without the use of special hardware, eliminating dark spots at corner locations.

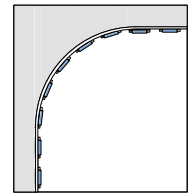


### Option 2 - Mounting Channel (Part# AVXF-MC)

An optional mounting channel may have been provided with your materials. Screw the channel securely in place, then snap each socket into the channel. Attach screws every 8".



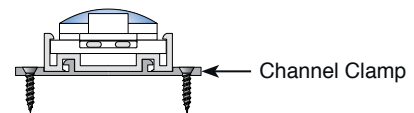
Attach screws every 8"



Mounting Channel conforms to a 24" inside or outside radius.

### Option 2A - Channel Clamps (Part# AVXF-CP)

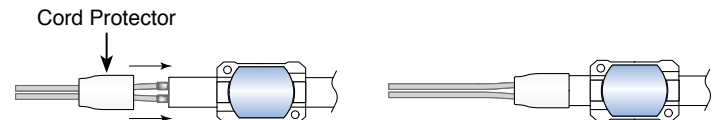
These clamps are for use with our AVXF-MC Mounting Channel. Screw the clamps securely in place, then snap in the channel. Attach clamps every 8".



Channel Clamp

### Power Feeds - ECL - WH (White)

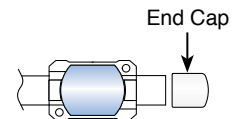
AVXF may have been provided in bulk to be cut on site for a precise fit. Wire leads need to be soldered to the cut lengths. Fit Cord protectors over the soldered connections to insulate the conductors.



Cord Protector

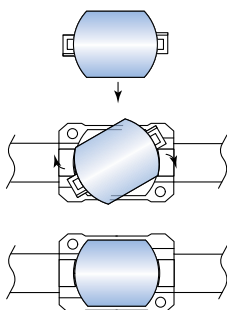
### End Caps - Part# ECD-WH (White)

Ends caps are attached to the end of each Advantage FX lighting fixture. If the fixture needs to be trimmed, a new end cap needs to be attached to the end of the fixture.



End Cap

### Installing LED modules.

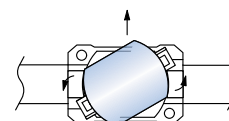


1. Insert LED module into socket.

2. Rotate clockwise to firmly lock socket in place.

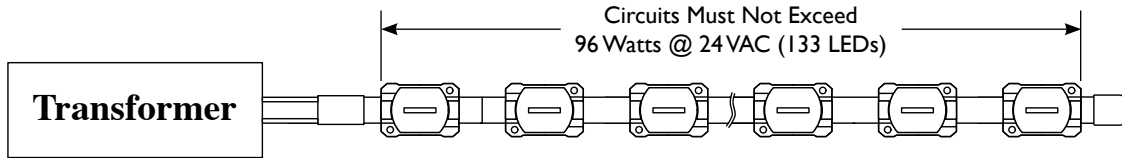
### Replacing LED modules.

Rotate counter clockwise to remove LED module. Follow steps 1 and 2 to insert replacement module.



Step 4 / Option A - Magnetic Transformer - Class 2 / 24 VAC operation

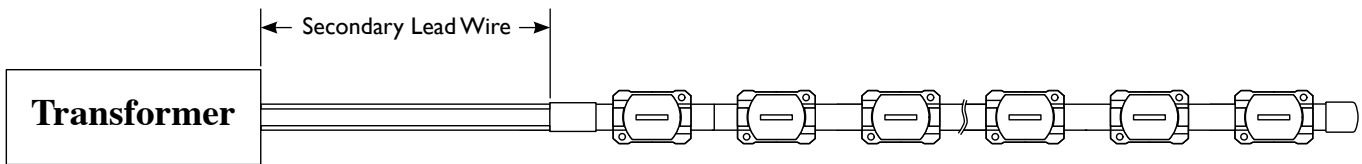
Secondary Circuit Limitation



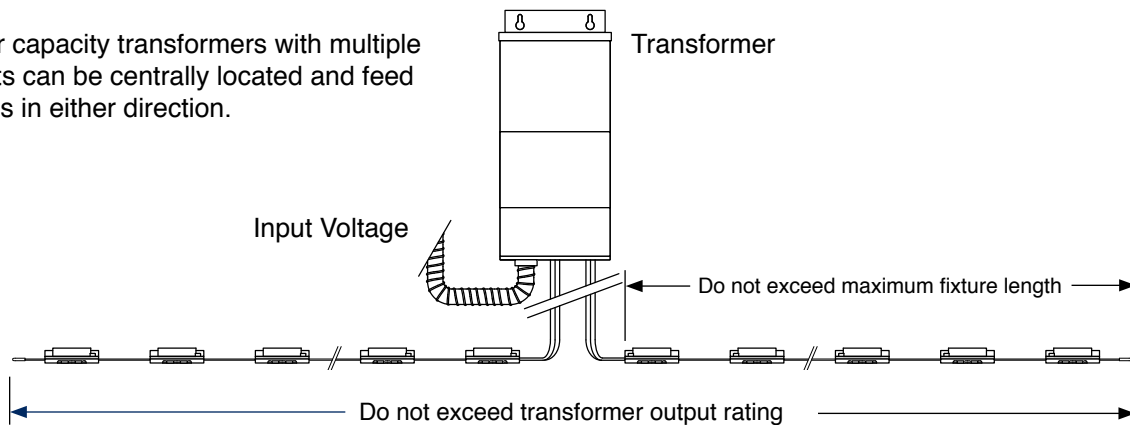
Recommended Lead Wire Size

The distance from the transformer to the fixture, and the load of the fixture, will determine the proper size of secondary wire. The chart on the right indicates recommended wire size based on an individual transformer output being loaded to its full capacity of 4 Amps / 96 Watts.

Secondary Lead Wires	
Wire Size	Wire Length
#16 AWG	50' (15 M)
#14 AWG	75' (23 M)
#12 AWG	100' (30 M)
#10 AWG	150' (46 M)



Larger capacity transformers with multiple outputs can be centrally located and feed fixtures in either direction.



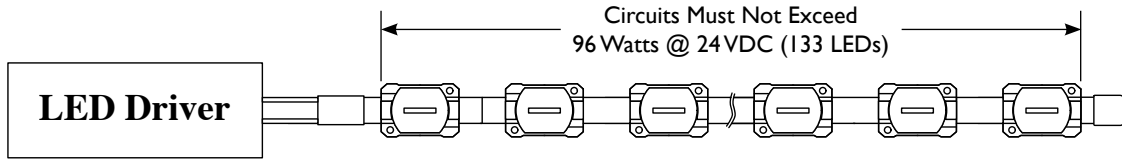
**⚠ PRECAUTIONS**

Transformers should be installed in an accessible location. Magnetic transformers generate heat and must be installed in locations where there is free-air circulation.

For additional information, please refer to the instruction manual provided with your transformer.

Step 4 / Option B - LED Driver - Class 2 / 24 VDC operation

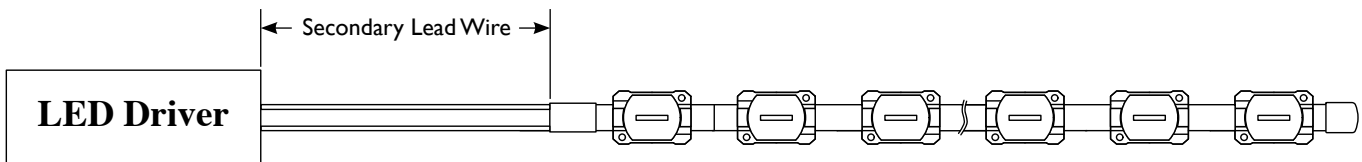
Secondary Circuit Limitation



Recommended Lead Wire Size

The distance from the LED Driver to the fixture, and the load of the fixture, will determine the proper size of secondary wire. The chart on the right indicates recommended wire size based on an individual driver output being loaded to its full capacity of 4 Amps / 96 Watts.

Secondary Lead Wires	
Wire Size	Wire Length
#16 AWG	50' (15 M)
#14 AWG	75' (23 M)
#12 AWG	100' (30 M)
#10 AWG	150' (46 M)



LED Driver Installation

LDR24-96

This 96 Watt Class 2 LED Driver converts an AC input into a 24 VDC output. Refer to the manual provided with the LED Driver for detailed installation instructions.

Part#	Input Volts	Output Volts	Output Ratings
LDR24-96	100~277	24VDC	1 @ 4 Amps

## LED Dimmer Instructions 24 VDC (Optional)

### LC Dimming System

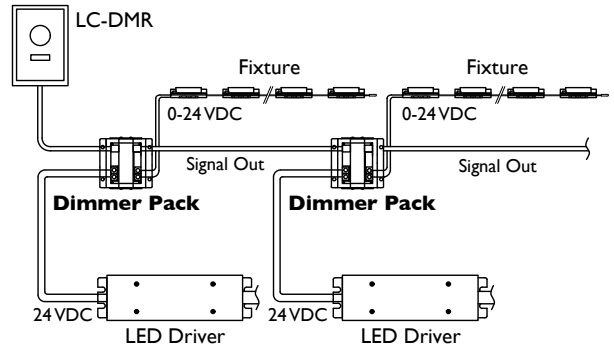
#### Wall Dimmer - Part #: LC-DMR

Power to the remote wall dimmer is provided from the LED Driver powering the first Dimmer Pack. A 50 foot CAT5 cable is provided.

#### Dimmer Pack - Part #: LC-1CH-DP

Each dimmer pack receives a 24 VDC output from an LDR24-96 LED Driver. A CAT5 cable is provided with each unit. Up to 25 dimmer packs may be connected in series if the total length of all CAT5 cable does not exceed 165 feet from the wall dimmer to the last dimmer pack.

For further information, refer to the instruction manual provided with the LC-1CH-DP.



### LC-1CH-MULTI Dimming System

Tokistar's LC-1CH-MULTI Dimmer Pack is compatible with industry-standard dimmers working on DMX or 0/1-10 VDC protocol.

#### Dimmer Pack - Part #: LC-1CH-MULTI

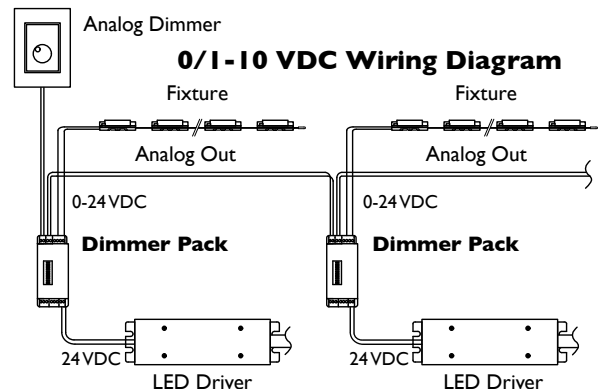
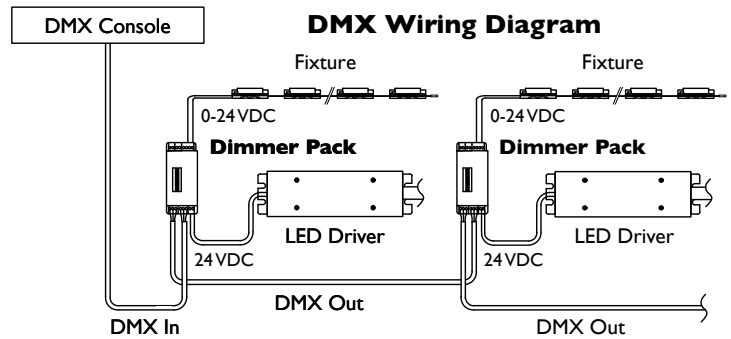
Each dimmer pack receives a 24 VDC output from an LDR24-96 LED Driver.

**DMX Mode** - Each unit is independently addressable. Up to 36 dimmer packs may be connected in series. For applications exceeding 36 dimmer packs, an additional feed from the DMX dimmer is required. The additional feed(s) can be sent directly from the dimmer, or you may use DMX Splitters. Consult factory on details of DMX Splitters.

**Analog Modes** - For operation from devices using 0/1-10VDC protocol, up to 10 dimmer packs may be connected in series. For applications exceeding 10 dimmer packs, an additional feed from the analog dimming device is required.

**Manual Mode** - You may select a light intensity the fixtures will operate at. In this case, no external dimming device is required.

For further information, refer to the instruction manual provided with the LC-1CH-MULTI.



## PRECAUTION

All dimming components are rated for dry location only. They must be installed within an enclosure suitable for the environment.

## TOKISTAR® LIGHTING

1015 E. Discovery Lane  
Anaheim, CA 92801

TEL: 714 772 7005 FAX: 714 772 7014

email: info@tokistar.com Website: www.tokistar.com