



# Source Four Mini LED

## F-Drive

## User Manual

Part Number: 7063M2130 Rev C

Released: 2023-12

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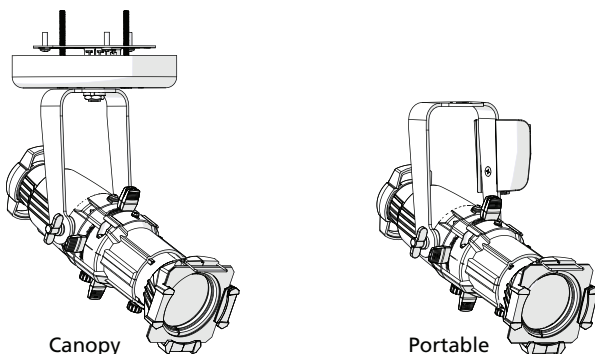
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# Overview

This guide provides installation instructions for Source Four Mini LED luminaires. They are intended for use with the ETC F-Drive family of drivers and accessories (including R12, W1, and B-Box) or other Class 2 or Low Voltage Limited Energy (LVLE) power supplies (48 VDC maximum). Consult the specifications and installation manual for your driver to ensure compatibility.

This release of the Source Four Mini LED luminaire is compatible with the R12 CC-150 output card or the W1 CC driver. Set the output channel for the luminaire to 350 mA.



**Note:** For the portable luminaire, use an M10 bolt to secure a clamp (provided separately) to the luminaire.

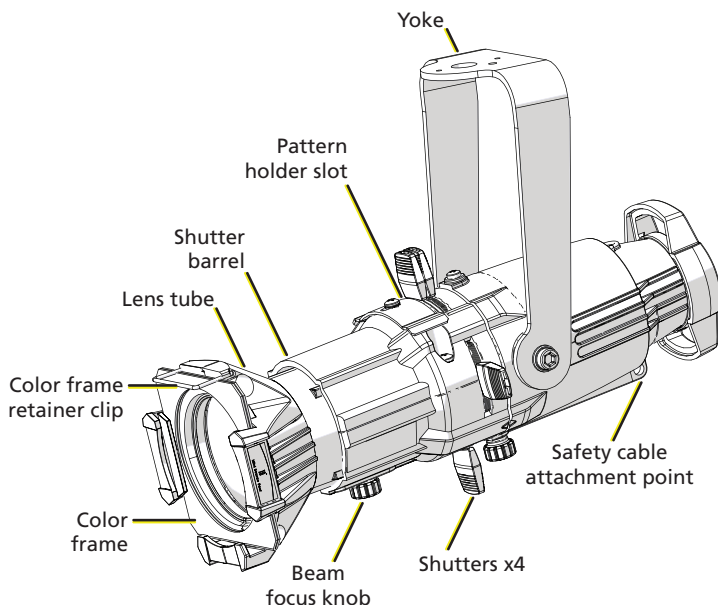
For more information about compatible products, see the resources below, which are available for download at [etcconnect.com/Products/Power-Controls/LED-Drivers/F-Drive/Documentation.aspx](https://etcconnect.com/Products/Power-Controls/LED-Drivers/F-Drive/Documentation.aspx):

- *F-Drive Series R12 Installation Manual*
- *F-Drive Series W1 Installation Manual*
- *F-Drive R12 and W1 Wiring Reference Guide*
- *F-Drive B-Box4 Installation Guide*

The F-Drive System Design Tool is available at [etcconnect.com/FDriveSysDesignTool](https://etcconnect.com/FDriveSysDesignTool).

You must install a lens tube before you use the Source Four Mini LED. There are four lens tube sizes available: 19°, 26°, 36°, and 50°.

There are also canopy, track, and portable versions of the luminaire that are not compatible with the F-Drive family of drivers and accessories. See the luminaire datasheets at [etcconnect.com](https://etcconnect.com) for more information on Source Four product options.



## Safety



**WARNING:** Note the following safety warnings before use:

- Use the luminaire in dry locations only, where humidity does not exceed 90 percent (non-condensing).
- Do not mount the luminaire on or near a flammable surface.
- Check that the accessory holder is locked before mounting the luminaire.
- Do not operate the luminaire without a lens installed.
- Do not use this luminaire if a lens is deeply scratched or cracked. You must replace a lens when it is damaged.



**AVERTISSEMENT :** Prendre connaissance des avertissements de sécurité suivants avant toute utilisation :

- Ne pas installer le projecteur sur ou à côté d'une surface inflammable.
- Vérifiez que le porte-accessoires est verrouillé avant de monter le projecteur.
- N'utilisez pas le projecteur sans que la lentille soit installée.

# IMPORTANT SAFEGUARDS

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

- Keep lamp away from materials that may burn.
- Do not touch hot lens, guard, or enclosure.
- Do not remain in light if skin feels warm.
- Do not look directly at lighted lamp.
- External temperature after 5 minutes of full-brightness operation: 50°C (122°F).
- External temperature when steady state is achieved: 67°C (152.6°F).

# SAVE THESE INSTRUCTIONS

## Canopy Luminaire



**WARNING: RISK OF ELECTRIC SHOCK! Power must be off when you perform this procedure.**

**The luminaire must be installed by a qualified electrician in accordance with all national and local electrical and construction codes and regulations.**

**AVERTISSEMENT : RISQUE DE DÉCHARGE ÉLECTRIQUE! L'alimentation doit être éteinte avant d'exécuter cette procédure.**

	The luminaire must be installed at least 0.1 m (4.0 in) away from all lighted objects.	Le luminaire doit être installé à au moins 0,1 m (4,0 po) de tout objet éclairé.
	General warning	Avertissement général
	This product should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling.	Ce produit ne doit pas être jeté avec les déchets ménagers mais doit être déposé dans une collecte de déchets électroniques ou dans un point de collecte.
	This product meets the safety requirements specified for Class III according to IEC 60536.	Produit à Protection Classe III Très basse tension conforme à la norme IEC 60536.
	The product input or output is suitable for direct current only.	L'entrée et la sortie de ce produit convient uniquement au courant continu.

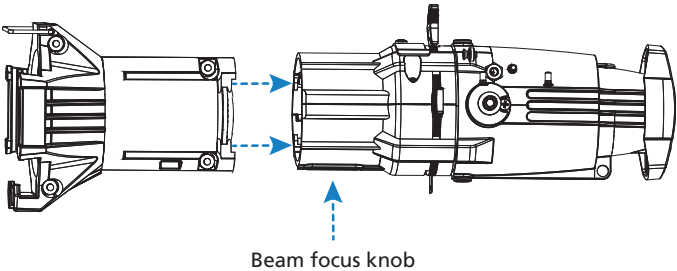
# Installation

## Install a Lens Tube

You must install a lens tube before you use the Source Four Mini LED. There are four lens tube sizes available: 19°, 26°, 36°, and 50°.

Lens Tube	Description
4M19LT (-1, -5)	19° Source Four Mini Lens Tube Only Black (White, Silver)
4M26LT (-1, -5)	26° Source Four Mini Lens Tube Only Black (White, Silver)
4M36LT (-1, -5)	36° Source Four Mini Lens Tube Only Black (White, Silver)
4M50LT (-1, -5)	50° Source Four Mini Lens Tube Only Black (White, Silver)

1. Unscrew the beam focus knob from the loose lens tube.
2. Slide the lens tube into the shutter barrel.
3. Install the beam focus knob.



## Luminaire Wiring

Luminaire power and data in and out cables terminate to RJ45 connectors. Please note the following requirements for wiring:

- Use 0.25 mm<sup>2</sup> (23 AWG) or larger gauge conductors in Category-type cable terminated to the T568B standard. Not all Cat5 or Cat6 cables meet this gauge requirement.
- You can connect up to four luminaires along one run of cable when using RJ45 output from a compatible output card or driver. The total cable distance for each wiring run should not exceed 100 m (328 ft). See the *F-Drive R12 and W1 Wiring Reference Guide* for more details.



# Select the Driver



**CAUTION:** *F-Drive channels are not configured to the proper current for this luminaire by default. You must configure the channel on the driver to 350 mA. Connecting the luminaire to a channel that is configured for more than 350 mA will shorten the life of the luminaire LEDs and may void the luminaire warranty.*

This release of the Source Four Mini LED luminaire is compatible with the R12 CC-150 output card or the W1 CC driver. Set the output channel for the luminaire to 350 mA.

For more information about compatible products, see the resources below, which are available for download at [etcconnect.com/Products/Power-Controls/LED-Drivers/F-Drive/Documentation.aspx](https://etcconnect.com/Products/Power-Controls/LED-Drivers/F-Drive/Documentation.aspx):

- *F-Drive Series R12 Installation Manual*
- *F-Drive Series W1 Installation Manual*
- *F-Drive R12 and W1 Wiring Reference Guide*
- *F-Drive B-Box4 Installation Guide*

The F-Drive System Design Tool is available at [etcconnect.com/FDriveSysDesignTool](https://etcconnect.com/FDriveSysDesignTool).

## RJ45 Pinout Information

### In Port

Pin	Description
1	- *
2,6	THRU 1 **
3,7	THRU 2 **
4,8	THRU 3 **
5	+ *

\*Pins 1 and 5 receive power from the source or the previous luminaire in line.

\*\*These pins pass through power to the next luminaires in line.

### Out Port

Pin	Description
1,5	THRU 1
2,6	THRU 2
3,7	THRU 3
4,8	No Connection

# Use of Third-Party Drivers with Daisy-Chained Luminares

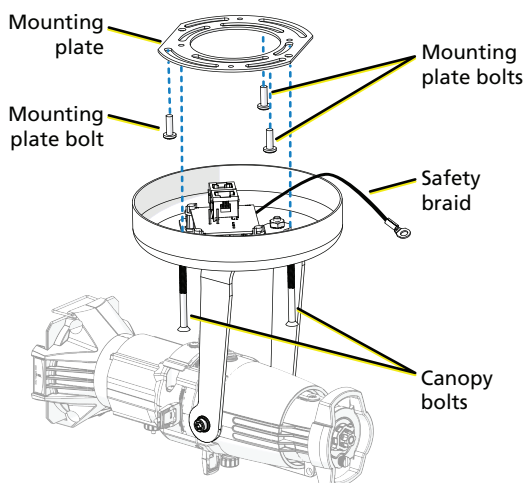
Source Four Mini LED luminares can be controlled by third-party Class 2 or Low Voltage Limited Energy (LVLE) drivers that provide a maximum of 48 VDC. To daisy-chain luminares and still have independent channel functionality, you must wire the first luminaire in the chain as described below. (The RJ45 outputs on F-Drive natively support this wiring configuration.) Configure the third-party drivers to a maximum of 350 mA.

Channel	Input Pins for First Luminaire in Daisy-Chain	Description
1 (First luminaire)	1	Channel 1 -
	5	Channel 1 +
2 (Second luminaire)	2	Channel 2 -
	6	Channel 2 +
3 (Third luminaire)	3	Channel 3 -
	7	Channel 3 +
4 (Fourth luminaire)	4	Channel 4 -
	8	Channel 4 +

## Install Canopy Luminaire



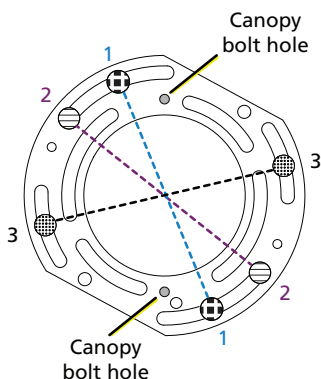
**Note:** The canopy luminaire can be installed directly on 4 in and 4-11/16 in back boxes, or on back boxes with round cover plates. The canopy luminaire cannot be installed on 1-gang back boxes or trim rings.



1. Remove the mounting plate from the luminaire by removing the two canopy bolts.
2. Using two of the mounting plate bolts, secure the mounting plate to the installed back box (not included).

**Mounting plate  
installation detail**

Install the mounting plate screws in one of the three position-pairings shown.



3. Place the copper safety braid loop over the third mounting plate bolt, and then attach the mounting plate bolt to the back box to help secure the fixture during installation.
4. Connect a power and data in cable from the driver or ETC breakout box to the "IN" port on the luminaire. If you are daisy-chaining luminaires, be careful to connect the cables to the correct "IN" and "OUT" ports. (The cable from the "OUT" port on one luminaire connects to the "IN" port of the next luminaire.) Incorrect connections will result in improper operation of the luminaires.
5. Use the canopy bolts to secure the luminaire to the mounting plate.
6. Open all four shutter blades by sliding them outward until they stop.
7. Focus the luminaire as needed. See [Focus and Setup on page 9](#).

## Connect Portable Luminaire

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**Note:** *For the portable luminaire, use an M10 bolt to secure a clamp (provided separately) to the luminaire.*

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1. Connect a power and data in cable from the driver or ETC breakout box to the "IN" port on the luminaire. If you are daisy-chaining luminaires, be careful to connect the cables to the correct "IN" and "THRU" ports. (The cable from the "THRU" port on one luminaire connects to the "IN" port of the next luminaire.) Incorrect connections will result in improper operation of the luminaires.
2. Open all four shutter blades by sliding them outward until they stop.
3. Focus the luminaire as needed. See [Focus and Setup on the facing page](#).

## Power Up Procedure

1. Verify that each luminaire is connected to a Constant Current (CC) driver or output card before you power up the luminaires. See the installation manual for your F-Drive for more compatibility information.
2. Use Concert to verify that each CC channel is set to output 350 mA.
3. Refer to the installation manual for your F-Drive for information about the power up procedure for the driver.

## Identify

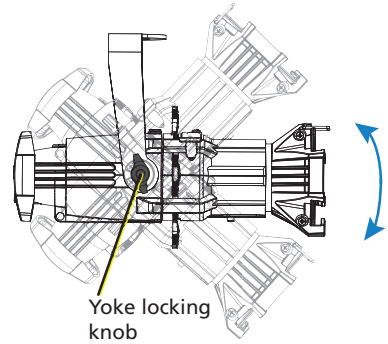
You can send an identify command to individual channels of an R12 output card or W1 driver using ETC Concert or a third-party RDM controller. Luminaires connected to an F-Drive will respond to an RDM identify command by blinking on and off: 500 ms on, 500 ms off, until the identify command is ended. See the F-Drive Device Package Help in Concert or the installation manual for your F-Drive for information about this RDM command.

# Focus and Setup

## Adjust the Tilt

Image shows the yoke from the canopy version of the fixture.

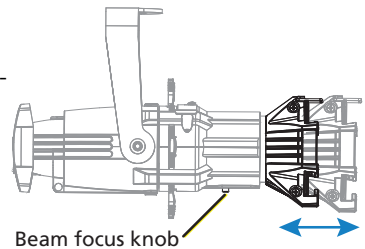
1. Loosen, but do not remove the yoke locking knob.
2. Tilt the luminaire as needed.
3. Tighten the yoke locking knob.



## Focus the Beam

Image shows the yoke from the canopy version of the fixture.

Loosen the beam focus knob, adjust the lens tube position as needed, and then tighten the knob.

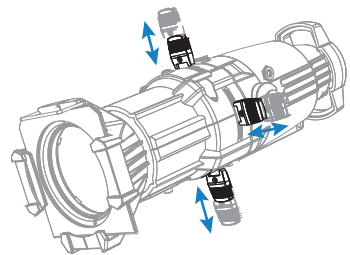


## Shape the Beam

You can shape the beam using the four shutters or with a pattern.

### Shape the Beam with Shutters

The luminaire has four shutters: left, right, top, and bottom. Each shutter can be pulled out or pushed in to create the desired beam shape.

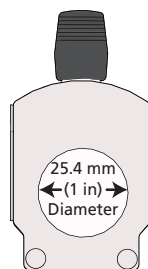


## Shape the Beam with a Pattern

The luminaire has a pattern-holder slot on the top side of the shutter barrel, in front of the shutter. It accommodates a glass or stainless steel E-size (37.5 mm with a 25.4 mm image area) pattern. The maximum pattern thickness that can be accommodated is 1.1 mm (0.04 in).

Use an optional donut in the color frame holder to enhance pattern projection.

When the slot is not in use, a small sheet metal cover secured with a Phillips screw prevents light leakage.



1. Use a Phillips screwdriver to loosen the screw on the slot cover. Do not remove the screw.
2. Slide the cover knob on the luminaire completely to the side to expose the slot.
3. Insert the pattern holder.
4. Slide the slot cover back toward the shutters until it meets the pattern handle. Leave enough space to move the handle.
5. Secure the slot cover by tightening the screw.

## Use the Color Frame Holder

The Source Four Mini LED (F-Drive) comes equipped with a color frame (either 70 mm or 2 3/4 in), which is a metal frame used to hold color media (often referred to as gel) in front of the lens. The color frame holder is equipped with a retaining clip that prevents the color frame from falling out.

Additional accessories are available that also fit into the color frame holder: top hat, short top hat, half hat, short half hat, and donut. When you use an accessory, install the color frame in the rear slot of the holder.



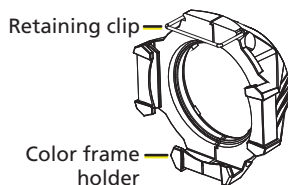
**WARNING:** Check that the accessory holder is locked before mounting the luminaire.

**AVERTISSEMENT :** Vérifiez que le porte-accessoires est verrouillé avant de monter le projecteur.



**Note:** The color frame should be inserted with the open side down.

1. Release the retaining clip by gently pushing it up.
2. Insert the color frame.
3. Lock the retaining clip by gently pushing it down.



# Cleaning

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**WARNING:** Do not use ammonia-based cleaners or other harsh commercial cleaners. Clean lens only as directed.

**Commercially available glass cleaning agents should be avoided as they may contain ammonia, other harsh chemical detergents, or abrasive agents. These cleaners may damage the lens surface. Do not immerse or soak the lens in any cleaning solution.**

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1. Remove the beam focus knob from the shutter barrel.
2. Remove the lens tube from the shutter barrel.
3. Remove dust with a blast of oil-free air or wipe with a clean, lint-free cloth.
4. Slide the lens tube back into the shutter barrel with the color frame retainer clip on the top.
5. Reinstall the beam focus knob.

# Specifications and Reference

For current and complete compliance and specifications, see the Source Four Mini LED (F-Drive) datasheet at [etcconnect.com](http://etcconnect.com).

## FCC Compliance

### Source Four Mini LED (F-Drive)

(For any FCC matters):

Electronic Theatre Controls, Inc.  
3031 Pleasant View Road  
Middleton, WI 53562  
+1 (608) 831-4116  
[etcconnect.com](http://etcconnect.com)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation. Visit [etcconnect.com/products](http://etcconnect.com/products) for current and complete compliance information including FCC compliance.



**Note:** *This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Any modifications or changes to this product not expressly approved by Electronic Theatre Controls, Inc. could void the user's authority to operate the product. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at their own expense.*

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