

# LITETRONICS®

## 1'x4' Dimmable LED Retrofits

### Installation Instructions

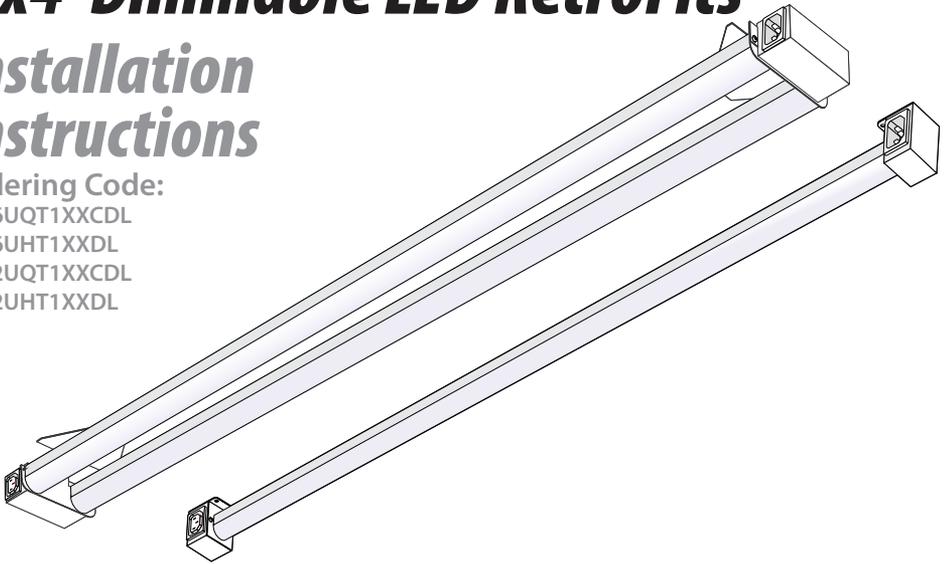
Ordering Code:

RF16UQT1XXCDL

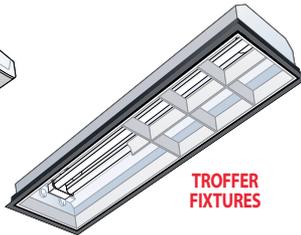
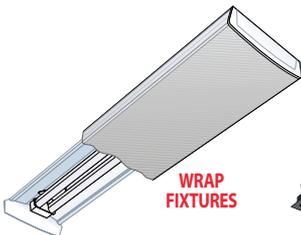
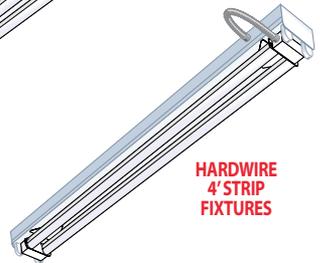
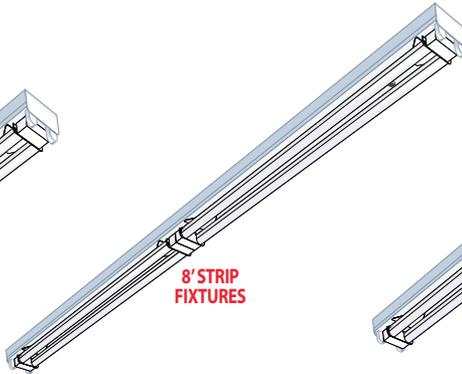
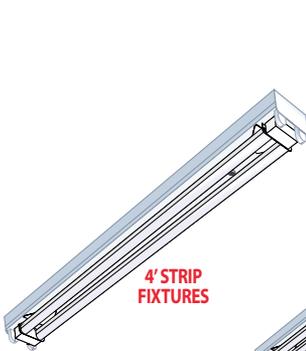
RF16UHT1XXDL

RF32UQT1XXCDL

RF32UHT1XXDL



**PLEASE READ THESE INSTRUCTIONS  
BEFORE INSTALLATION OF THE FOLLOWING:**



## INTRODUCTION & TABLE OF CONTENTS

Congratulations on the purchase of your 1x4 Retrofit. It is usable for a range of installations. Some of the most popular ones are included here.

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## SAFETY INSTRUCTIONS AND WARNINGS

**CRITICAL SAFETY INSTRUCTIONS:** Installation should only be conducted by a qualified electrician in accordance with NEC and any relevant local building codes.

**LED RETROFIT WARNINGS:** Risk of fire or electric shock. LED RetroFit kit installation requires knowledge of luminaire electrical system. If not qualified, do not attempt installation. Contact a qualified electrician. Luminaire wiring and electrical parts may be damaged when drilling for installation of LED RetroFit kit. Check for enclosed wiring and components. Do not make or alter any open holes in the enclosure of wiring or electrical components during kit installation.

**WARNING:** Risk of fire or electric shock. Install this kit only in luminaires that have the construction features and dimensions shown in the photographs and/or drawings and where the input rating of the retrofit kit does not exceed the input rating of the luminaire. Only those open holes indicated in the photographs and/or drawings may be made or altered as a result of kit installation. Do not leave any other open holes in an enclosure of wiring or electrical components.

To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

This LED RetroFit Kit and Junction Box Cover shall only be installed into a UL/CUL listed luminaire with a steel enclosure. DO NOT INSTALL THIS RETROFIT KIT INTO LUMINAIRES WITH NON-FERROUS METAL OR POLYMERIC ENCLOSURES

### DISCONNECT SAFETY INSTRUCTIONS:

**WARNING** - This is a current rated device. Use in applications involving amperage beyond its rating can be dangerous and cause electrical fires. See note on this page for allowable current and voltage levels and do not exceed those levels.

**DANGER** - NEVER remove wires from product as contact with electricity can cause serious injury or death. Shut off power at the circuit breaker or remove fuse when installing this product.

**SAFETY NOTICE** - Improperly installed electrical wiring can be dangerous and cause electrical fires. This product must be used in accordance with the current rating and wire sizes listed.

**COPPER to COPPER ONLY.** Do not use on Aluminum. Temperature rating: 105° C (221° F) maximum. Flame Rated UL94V-0. This product is intended for use in a UL/C-UL listed Fluorescent Recessed or surface-mounted luminaire, Type IC or Non-IC, with the dimensions specified.

## INCLUDED CN-02 CONNECTOR FOR RETROFIT POWER



Line Side (4 ports)



# TOOLS AND MATERIALS FOR INSTALLATIONS



Step Ladder



Wire Stripper



Wire Cutter



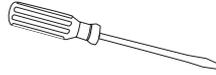
Pliers



Drill



1/4" Nut driver



Screw Driver

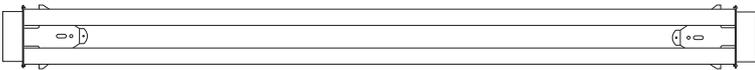
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## What comes in the box:

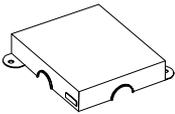
1x4 LED Retrofit- 1 Tube



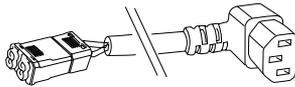
or



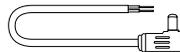
1x4 LED Retrofit- 2 Tube



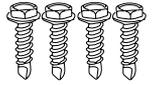
Magnetic Junction  
Box Cover



Power Cord (input wire with  
Luminaire disconnect both female  
and male parts are included)



Low voltage cord  
for 0-10V dimming



(4) Self-tapping  
screws, #8 x 1/2"



Conduit with 14AWG Wire  
(with RF32UHT1XXDL Only)



Split Snap Bushing



(2) Labels



(2) Wire Nuts

# 1X4 ACCESSORIES

Not included but available for purchase

## Power Cords



4' Lamp to lamp extension cable  
(RFAC-4FT)



8' Lamp to lamp extension cable  
(RFAC-8IN)



Direct dual connector  
(RFAC)

## Dimming Cords



4' low voltage dimming cable  
(RFALVC-4FT)



8' low voltage dimming cable  
(RFALVC-8IN)



Low voltage dimming connector  
(RFALVC)

## Tools & Kits



Wire cable accessories  
for stand alone installations  
(RFXPVLS)



20mm bi-metal hole saw  
(RFAHS-20)

## Section 1

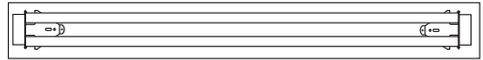
# RF16UQT1XXCDL AND RF32UQT1XXCDL 4' & 8' DIMMABLE STRIP FIXTURE INSTALL

Before



1x4 Strip Fixture with T8 Tubes

After



1x4 Strip Fixture with LED Retrofit

### READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

#### Installation Notes:

1. Retrofit must be installed to a grounded luminaire.
2. 1x4 strip install does not require the use of a junction box.
3. Ballast cover should be mechanically secured to physically support the Retrofit.

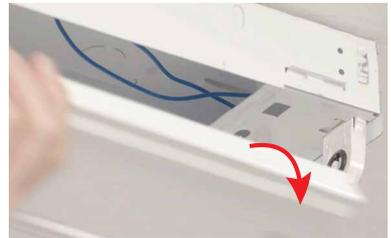
1. Turn off the power to the fixture from the circuit breaker.



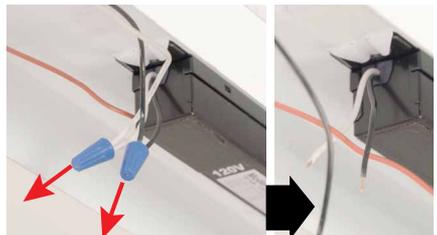
2. Remove the existing fluorescent tubes. Recycle according to EPA guidelines (EPA.Gov).



3. Open the fixture cover (belly pan) to expose the ballast and set it aside.

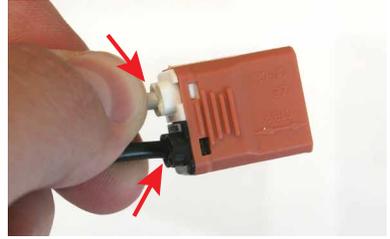


4. Disconnect the existing input, output and 0-10V ballast leads close to the ballast enclosure and remove the leads (black, white, purple and gray wires). Lampholders may remain in place but the leads to the lampholders should be cut at the lamp holder and at the ballast.



## RF16UQT1XXCDL AND RF32UQT1XXCDL 4' & 8' DIMMABLE STRIP FIXTURE INSTALL

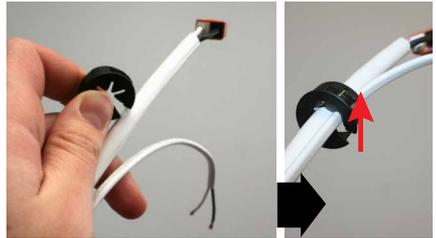
**5.** Connect branch power leads to the included female disconnect by inserting the wire leads into the corresponding color coded black and white holes in back of connector.



**6.** Punch hole through side knockout of strip fixture or drill a hole through the center of the cover (set aside in step 3) near the incoming branch power wires with 20mm bi-metal hole saw (sold separately ordering code RFAHS-20).



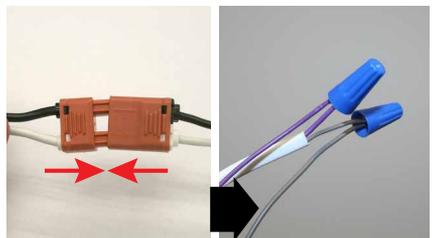
**7.** Clip the snap bushing onto the included power cord and low voltage cord.



**8.** Insert the power and low voltage cord into knock out or drilled hole. Fix bushing to panel hole.



**9.** Reconnect the male and female halves of the Luminaire disconnect. Connect dimming wires to incoming dimming line with wire nuts.



## RF16UQT1XXCDL AND RF32UQT1XXCDL 4' & 8' DIMMABLE STRIP FIXTURE INSTALL

10. Reaffix the fixture cover (belly pan).

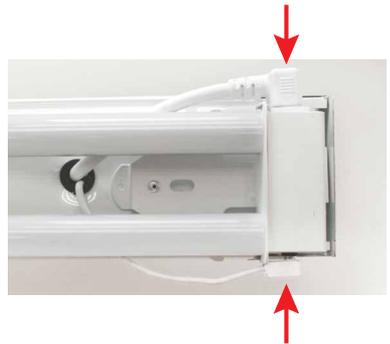


11. Attach the RetroFit to the fixture cover with integrated rare earth magnets. Position the LED RetroFit to preferred alignment. Secure to the fixture with 2 of the included self-tapping screws.



▶ **Route and position Retrofit wiring within luminaire enclosure clear of mounting hole where screws will be inserted.**

12. Plug the power cord connector and low voltage connector into the RetroFit.



13. Apply both included labels to the fixture.



14. Restore the power and you're done!



# HOW TO USE TWO 1'X4' RETROFITS TO CREATE 8' DIMMABLE STRIP

▶ For 8' install. Do not restore power until you complete steps 1a-1e below.

**1a.** Place and align the second 1' x 4' LED Retrofit with the C14 socket as close to the first LED Retrofit as needed to allow the use of RFAC dual connector (or cable). Magnets will hold it in position while you finish alignment.



**1b.** Insert the RFAC dual connector and RFALVC low voltage connector into the sockets to connect LED RetroFits.



**1c.** Fine tune alignment of the second fixture and secure with the 2 included self-tapping screws.



▶ Unused branch circuits supplying interconnected retrofit luminaires should be properly terminated.

**1d.** Apply both included labels to the fixture.



# HOW TO USE TWO 1'X4' RETROFITS TO CREATE 8' DIMMABLE STRIP

**1e.** Restore the power and you're done! You have combined two 1'x4' Retrofits into an 8' fixture.



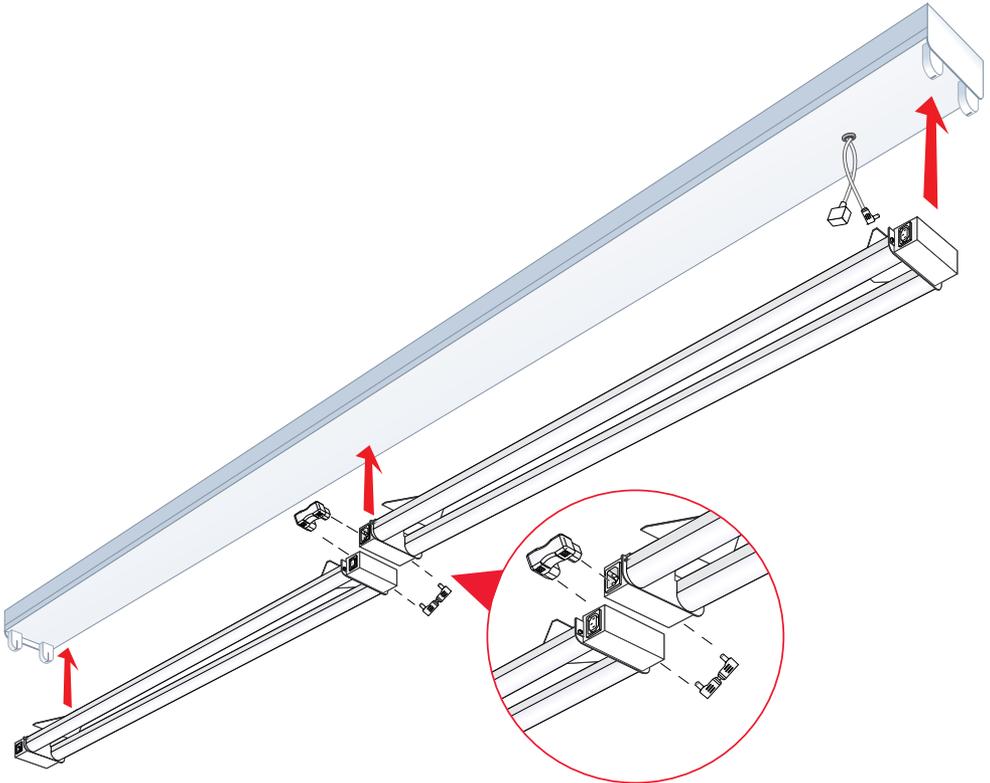
Our 1x4's can be assembled into long chains off one power source depending on Retrofit wattage.

- Connect retrofits when aligned together using the dual connector (RFAC) and low voltage connector (RFALVC).
- Connect retrofits together when up to 8" apart using 8in lamp to lamp extension cable (RFAC-8IN) and 8" low voltage connector (RFALVC-8IN).
- Connect retrofits together when 8'- 4' apart using 4ft lamp to lamp extension cable (RFAC-4FT) and low voltage connector (RFALVC-4FT).
- Cables shown on page 4.

Maximum number of units by Watts

16W = 36 Retrofits

32W = 18 Retrofits



## Section 2

# RF16UHT1XXDL AND RF32UHT1XXDL HARDWIRE DIMMABLE STRIP FIXTURE INSTALL

Before



1x4 Hardwire Strip Fixture with T8 Tubes

After



1x4 Hardwire Strip Fixture with LED Retrofit

### READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

#### Installation Notes:

1. Retrofit must be installed to a grounded luminaire.
2. Hardwire install does not use a junction box.
3. Ballast cover should be mechanically secured to physically support the Retrofit.

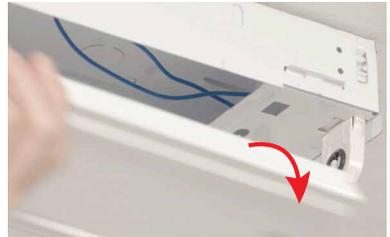
1. Turn off power to the fixture from the circuit breaker.



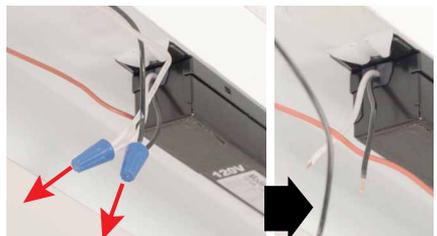
2. Remove existing fluorescent tubes. Recycle according to EPA guidelines (EPA.Gov).



3. Remove fixture cover (belly pan) to expose the ballast and set it aside.



4. Disconnect ballast and 0-10V wires from the incoming electrical lines. (Black, white, purple and gray wires).

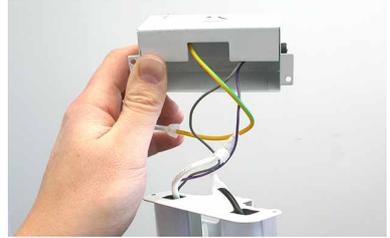


## RF16UHT1XXDL AND RF32UHT1XXDL HARDWIRE DIMMABLE STRIP FIXTURE INSTALL

**5.** On the LED RetroFit RF32UHT1XXDL open the end cover with the Litetronics logo by removing both screws.



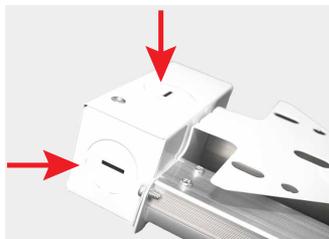
**6.** Once open, the internal black, white, green/yellow and 0-10V dimming wires to the LED tubes are visible.



**7.** Remove wire nuts from black, white and green/yellow wires coming from the tubes of the LED Retrofit.



**8.** Remove chosen knockout from the RetroFit end cover and make the fixture hole to connect the conduit.

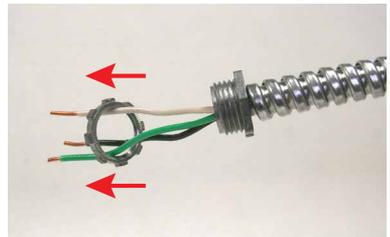


End Cover



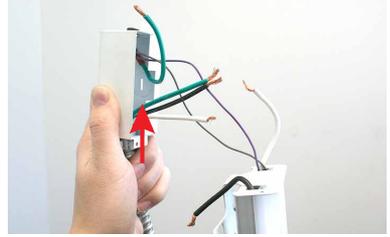
Fixture Hole

**9.** Remove the nut from the conduit.

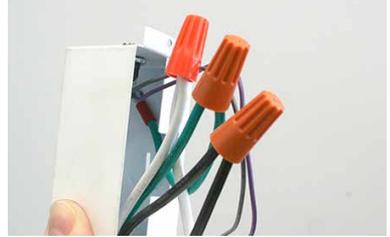


## RF16UHT1XXDL AND RF32UHT1XXDL HARDWIRE DIMMABLE STRIP FIXTURE INSTALL

**10.** Insert the conduit wires (black, white & green) through the hole of end cover. Place the conduit nuts over the three conduit wires inside cover. After that, push conduit end into knockout hole and secure with conduit nut.



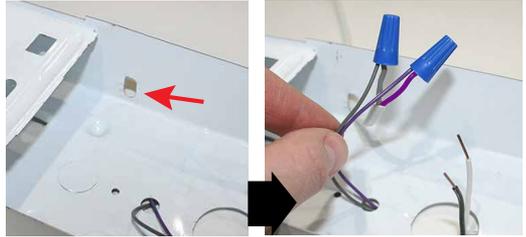
**11.** Connect conduit wires to LED RetroFit using wire nuts.  
-Black to black  
-White to white  
-Green to green/yellow.



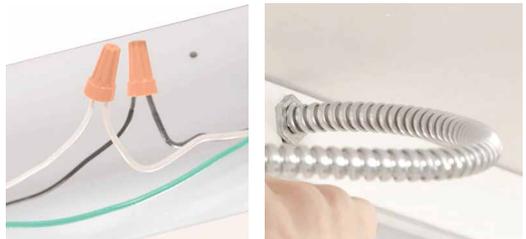
**12.** Replace end cover, and secure it with the two screws.



**13.** Connect dimming wires to incoming dimming line by passing cord through smaller side knockout of strip belly pan. Connect with wire nuts inside.



**14.** The wires on the conduit go into the fixture hole. Remove the conduit nut. Push the three wires into the fixture hole, then through the conduit nut, and secure. Connect conduit wires to incoming electrical lines inside fixture. Connect black to black, white to white with wire nuts. Then connect the green/yellow wire to ground screw of strip.



## RF16UHT1XXDL AND RF32UHT1XXDL HARDWIRE DIMMABLE STRIP FIXTURE INSTALL

**15.** Reaffix fixture cover (belly pan).



**16.** Attach fixture belly pan to your RetroFit with the rare earth magnets. Slide RetroFit to preferred alignment. Secure it to the fixture with the 2 included self-tapping screws.



**17.** Plug connector for low voltage dimming cord into the RetroFit.

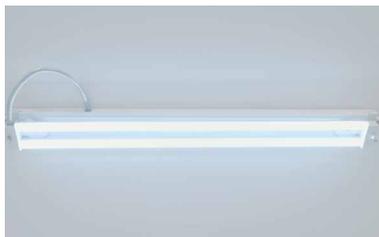


**18.** Apply both included labels to fixture.



**WARNING: IF RETROFITTING 8' STRIP, DO NOT RESTORE POWER YET. CONTINUE WITH 8' INSTALL STEPS 1A-1E BELOW.**

**19.** Restore the power and you're done!



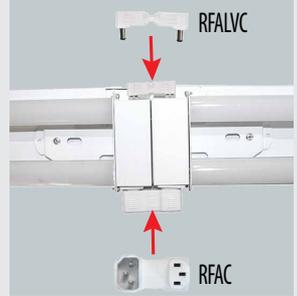
# HOW TO USE TWO 1'X4' RETROFITS TO CREATE 8' HARDWIRE DIMMABLE STRIP

▶ For 8' install. Do not restore power until you complete steps 1a-1e below.

**1a.** Place and align the second 1' x 4' Retrofit with the C14 socket as close to the first Retrofit as needed to allow use of Retrofit accessory connector.



**1b.** Insert both the RFAC dual connector and RFALVC low voltage connector into their sockets to connect the LED RetroFits together.



**1c.** Align the second fixture and secure with 2 included self-tapping screws



▶ Any unused branch power circuits supplying interconnected retrofit luminaires should be properly terminated.

**1d.** Apply both included labels to the fixture.



**1e.** Restore the power and you're done!



Our 1x4's can be assembled into long chains off one power source depending on Retrofit wattage.

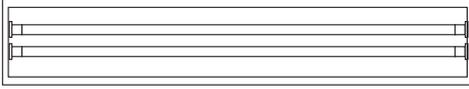
- Connect retrofits when aligned together using the dual connector (RFAC) and low voltage connector (RFALVC).
- Connect retrofits together when up to 8" apart using 8in lamp to lamp extension cable (RFAC-8IN) and 8" low voltage connector (RFALVC-8IN).
- Connect retrofits together when 8" - 4' apart using 4ft lamp to lamp extension cable (RFAC-4FT) and low voltage connector (RFALVC-4FT).
- Cables shown on page 4.

**Maximum number of units by Watts**  
32W = 18 Retrofits

## Section 3

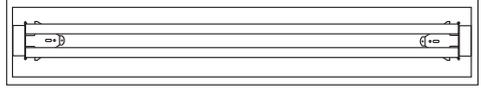
# RF16UQT1XXCDL AND RF32UQT1XXCDL DIMMABLE TROFFER OR WRAP INSTALL

Before



1x4 Troffer Fixture with T8 Tubes

After



1x4 Troffer Fixture with LED Retrofit

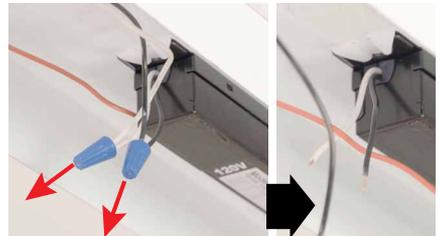
**READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION**

### Installation Notes:

1. Troffer or wrap install requires the use of a junction box.
1. Turn off power to fixture from circuit breaker.
2. Open and remove fixture cover.
3. Remove fluorescent tubes and ballast cover. Recycle tubes according to EPA guidelines (EPA.Gov).
4. Disconnect ballast and 0-10V wires from the incoming electrical lines. (Black, white, purple and gray wires).



RF32UQT1XXCDL (closed fixture)



# RF16UQT1XXCDL AND RF32UQT1XXCDL DIMMABLE TROFFER OR WRAP INSTALL

5. Remove lamp holders and mounting bracket.

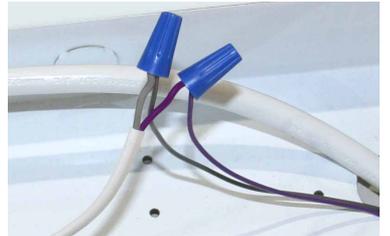


6. Unscrew and remove ballast from fixture.



**▶ If you are installing LED retrofit into a wrap fixture, instead of removing the lamp holders, just cut the remaining ballast wires as close to the lamp holders as possible.**

7. Connect dimming wires to incoming dimming line with wire nuts.

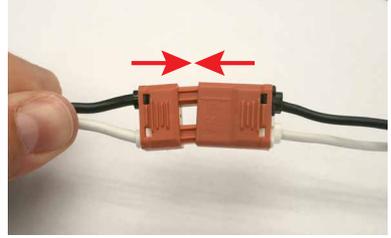


8. Insert the branch power wire leads into the back of the included female disconnect. They will lock in place.

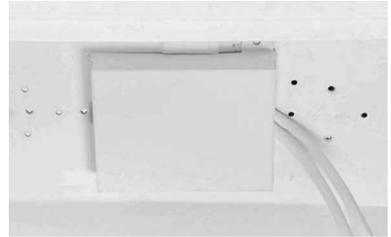


## RF16UQT1XXCDL AND RF32UQT1XXCDL DIMMABLE TROFFER OR WRAP INSTALL

**9.** Connect the male disconnect to the female disconnect attached to the included power cord.



**10.** Fully cover the mated disconnect, the incoming electrical wires and the low voltage cord using provided magnetic junction box cover. Make sure the power cord and low voltage cord use the junction box opening allowing connection to the LED RetroFit.



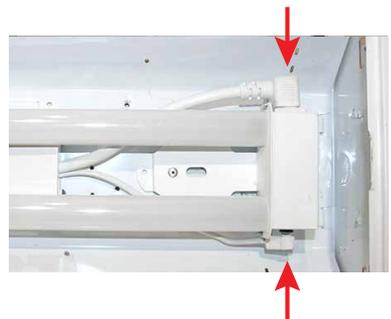
**11.** Secure junction box with 2 of the included self-tapping screws.



**12.** Affix the LED RetroFit to the fixture using the rare earth magnets. Slide the LED RetroFit to preferred alignment and secure to the fixture with 2 of the included self-tapping screws.



**13.** Plug the power cord connector and low voltage connector into the RetroFit.



# RF16UQT1XXCDL AND RF32UQT1XXCDL DIMMABLE TROFFER OR WRAP INSTALL

**14.** Apply both included labels to fixture.



**15.** Replace the lens/fixture cover.



RF32UQT1XXCDL (closed fixture)

**16.** Restore the power and you're done!



### READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

#### Installation Notes:

The LED RetroFit can be installed as a luminaire when hardwired and hung using the wire cable accessory (Ordering Code RFAXPVL5 sold separately).

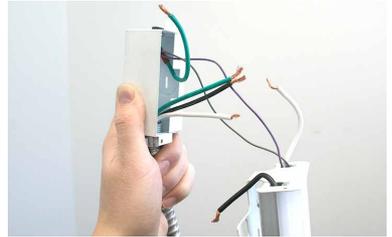
1. Turn off the power to the fixture from the circuit breaker.



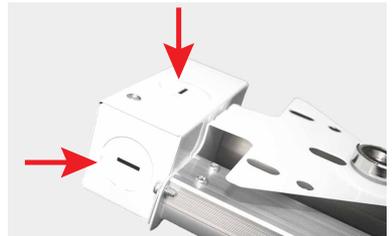
2. Open the end cover with Litetronics logo by removing both screws of the LED RetroFit.



3. Remove wire nuts from black, white and green/yellow wires.

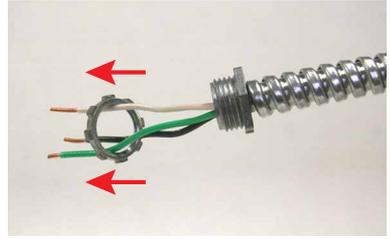


4. Remove the chosen knockout from end cover to make hole to connect conduit.

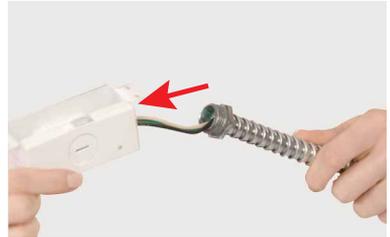


## RF32UHT1XXDL DIMMABLE STANDALONE USE

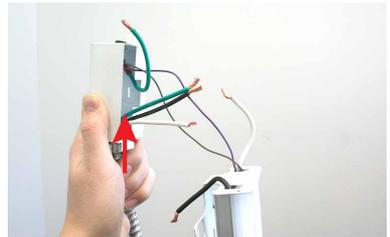
5. Unscrew the conduit nut from the conduit.



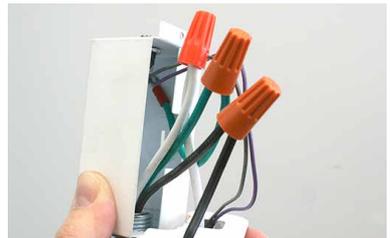
6. Insert the three conduit wires (black, white & green) through the hole in end cover.



7. Then place the conduit nut over the three conduit wires inside end cover. After that, place conduit through knockout hole and secure with conduit nut.



8. Connect conduit wires to the RetroFit with wire nuts. Connect black to black, white to white and green to green/yellow.



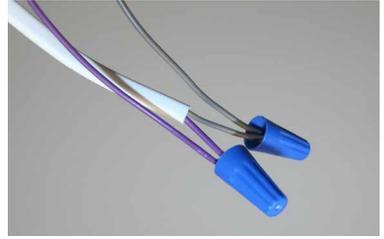
**CAUTION: To avoid risk of an electric shock, do not connect wires from conduit directly to the socket.**

9. Replace the end cover you removed earlier and secure it with 2 screws.



## RF32UHT1XXDL DIMMABLE STANDALONE USE

**10.** Connect dimming wires to incoming dimming line with wire nuts.



**▶** Now, it is time to mechanically hang the light using the wire cable accessories.

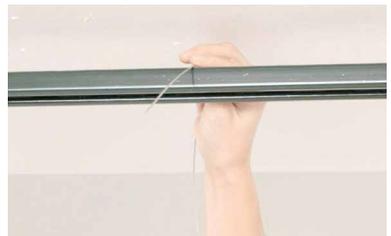


Wire cable accessories  
for stand alone installations  
(RFAXPVL5)

**11.** Thread the non loop side of the cable into the cable lock, and pull the cable through the lock.



**12.** Loop cable around ceiling or service attachment point and pass tail end of cable through the other hole of the cable lock.

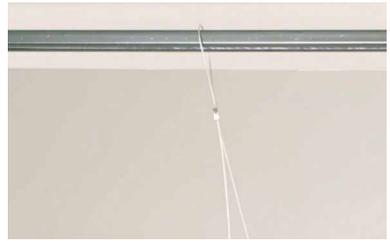


## RF32UHT1XXDL DIMMABLE STANDALONE USE

**13.** Pull the tail end of the cable through the cable lock so the LED RetroFit hangs at desired height.



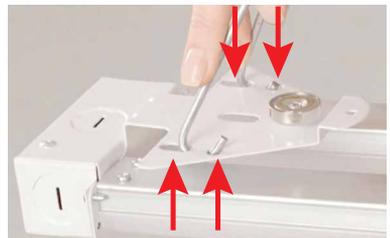
**14.** Repeat steps 12-14 with the second wire cable and lock.



**15.** Put both V hooks in the loops of the cables.



**16.** Locate the holes on the back of the mounting bracket of both ends of the LED RetroFit.



## RF32UHT1XXDL DIMMABLE STANDALONE USE

**17.** Insert both V hooks into the holes on the mounting bracket (both sides of LED RetroFit).



**18.** Put a level on the LED Retrofit for final leveling, and adjust the cable length to level the LED RetroFit.



**19.** Connect low voltage connector to RetroFit.



**20.** Restore the power and you're done! Enjoy your new energy saving LED Light.



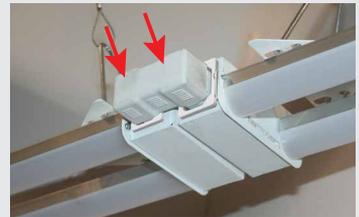
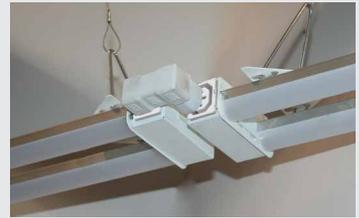
# HOW TO USE TWO 1'X4' RETROFITS TO CREATE 8' DIMMABLE STANDALONE STRIP

▶ For interconnecting install. Do not restore power before you complete steps 1a-1d below.

**1a.** Place and align the second 1' x 4' LED Retrofit with the C14 socket as close to the first LED Retrofit as needed to allow use of Retrofit accessory (RFAC, RFAC-8IN or RFAC-4FT) by repeating the wire cable accessory steps 11-18 in this section.



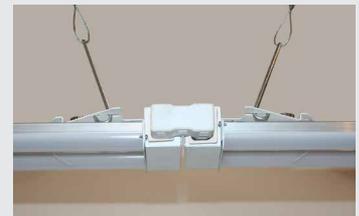
**1b.** Place the Retrofit accessory (RCAC, RFAC-8IN or RFAC-4FT) to connect both the Retrofit's together.



**1c.** Connect Retrofit accessory (RFALVC, RFALVC-8IN or RFALVC-4FT) to both Retrofit's.



**1d.** Restore the power and you're done! Enjoy your new energy saving LED Retrofit



## HOW TO USE TWO 1'X4' RETROFITS TO CREATE 8' DIMMABLE STANDALONE STRIP

Our 1x4's can be assembled into long chains off one power source depending on Retrofit wattage.

- Connect retrofits when aligned together using the dual connector (RFAC) and low voltage connector (RFALVC).
- Connect retrofits together when up to 8" apart using 8in lamp to lamp extension cable (RFAC-8IN) and 8" low voltage connector (RFALVC-8IN).
- Connect retrofits together when 8" - 4' apart using 4ft lamp to lamp extension cable (RFAC-4FT) and low voltage connector (RFALVC-4FT).
- Cables shown on page 4.

**Maximum number of units by Watts**

**16W = 36 Retrofits**

**32W = 18 Retrofits**





Thank you for choosing

**LITETRONICS®**

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