PURE EDGE
LIGHTING

Installation Instructions for **TruLine 1A Channel and Lens**

TL1A-CHLN-_

IMPORTANT INFORMATION
- This instruction must be used concurrently with other TruLine 1A DIY installation instructions.
- This product is wall or ceiling mount.
- This instruction shows a typical installation.
- This product must be installed by a qualified electrician and in accordance with local electrical codes.
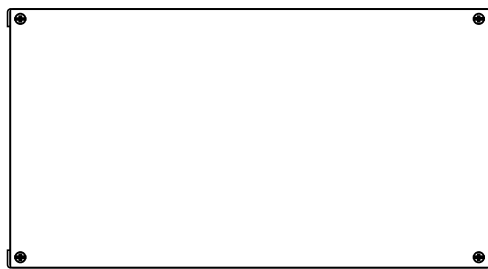
SAVE THESE INSTRUCTIONS!

INSTALLATION VIDEO

Scan with your mobile device to watch a typical installation video or visit www.pureedgelighting.com/pure/pure-videos/truline_5a_picture_frame/index.php

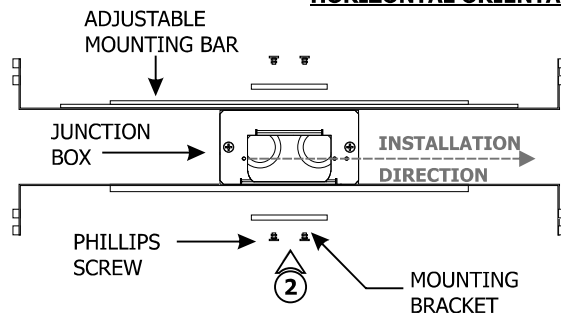## Section One: Lay the Drywall and Cut the Drywall for the Channel

A

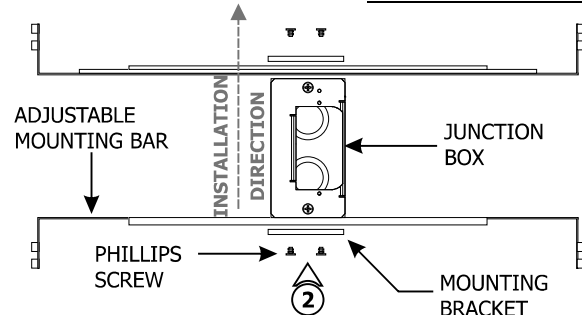
REMOTE POWER SUPPLY

Install the Remote Power Supply:

1: Remote power supplies must be installed within 40ft of the junction box. Refer to the instructions and wiring diagram provided with the remote power supplies.

B

HORIZONTAL ORIENTATION

ADJUSTABLE MOUNTING BAR

JUNCTION BOX

INSTALLATION DIRECTION

PHILLIPS SCREW

MOUNTING BRACKET

VERTICAL ORIENTATION

ADJUSTABLE MOUNTING BAR

INSTALLATION DIRECTION

JUNCTION BOX

PHILLIPS SCREW

MOUNTING BRACKET

NOTE: Refer to the instructions provided with any of the TL1A Power Feed Channel Connectors or the TL1A Plenum Power Feed Channel Connectors to install the junction box.

Install the Junction Box (Test Power to the LED Strip):

2: Mount each adjustable mounting bar to one side of the junction box and secure them with the mounting brackets and two Phillips screws provided.

C

ADJUSTABLE
MOUNTING BAR

#8 SCREW ——▶ ◆③

④

JUNCTION
BOX

CONDUIT W/
LOW-VOLTAGE WIRES
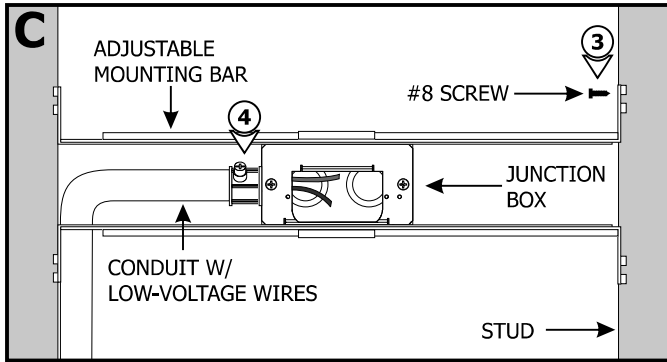
STUD ——▶

NOTE: The adjustable mounting bars mount to studs that are spaced 15" to 24" apart. If the span needs to be shorter than 15", then break the bar arms from dedicated lines.

3: Place the lips on the adjustable mounting bars against the studs. Secure the adjustable bars to the studs with the #8 screws.

4: Install conduit(s) (if required by local electrical code) and run the 24VDC low voltage wires coming from the power supply to the junction box.

D

CUT THE END OF THE POWER CONNECTOR
THAT IS GOING TO BE CONNECTED TO POWER

BOTTOM
MOUNT

SIDE
MOUNT

POWER CONNECTOR
(STATIC WHITE, RGB, TUNABLE WHITE)

BOTTOM
MOUNT

SIDE
MOUNT

POWER CONNECTOR
(RGBW)

5: Cut the end of the power connector that is going to be connected to power. Discard the unused connector. Strip the ends of the wires.

NOTE: Note the alignment of the +24VDC connection of the power connector to ensure proper alignment when installing the LED Strip in later steps.

NOTE: If installation requires RGB, RGB+W, or Tunable White, refer to wiring diagrams on pages 9 and 10.

E

⑥

⑥

POWER CONNECTOR

STATIC WHITE CONFIGURATION (SHOWN)
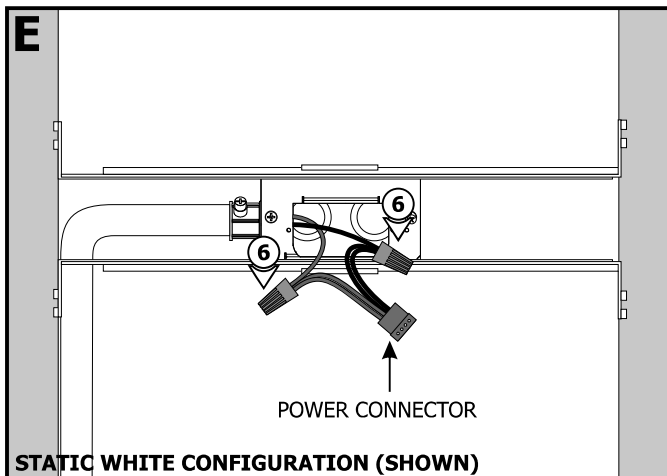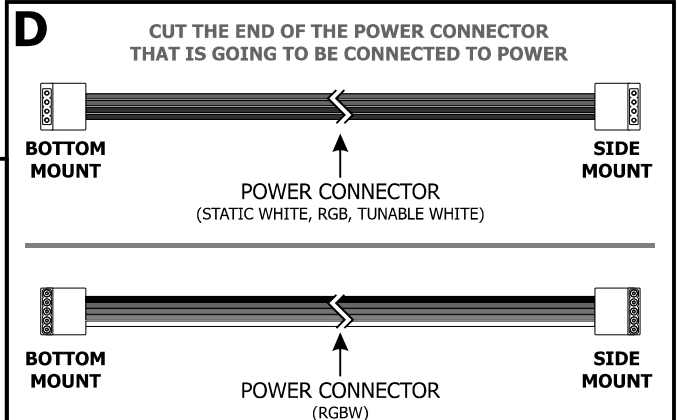
NOTE: Remote power supply wires must be present in junction box. Refer to instructions provided with power supply.
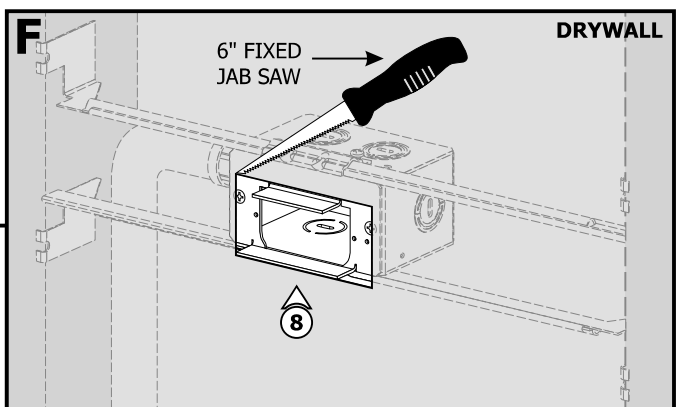
6: Connect the red +24VDC low voltage wire of the power supply to the red wires of the power connector using a wire nut. Connect the black -24VDC low voltage wire of the power supply to the black wires of the connector using a wire nut.
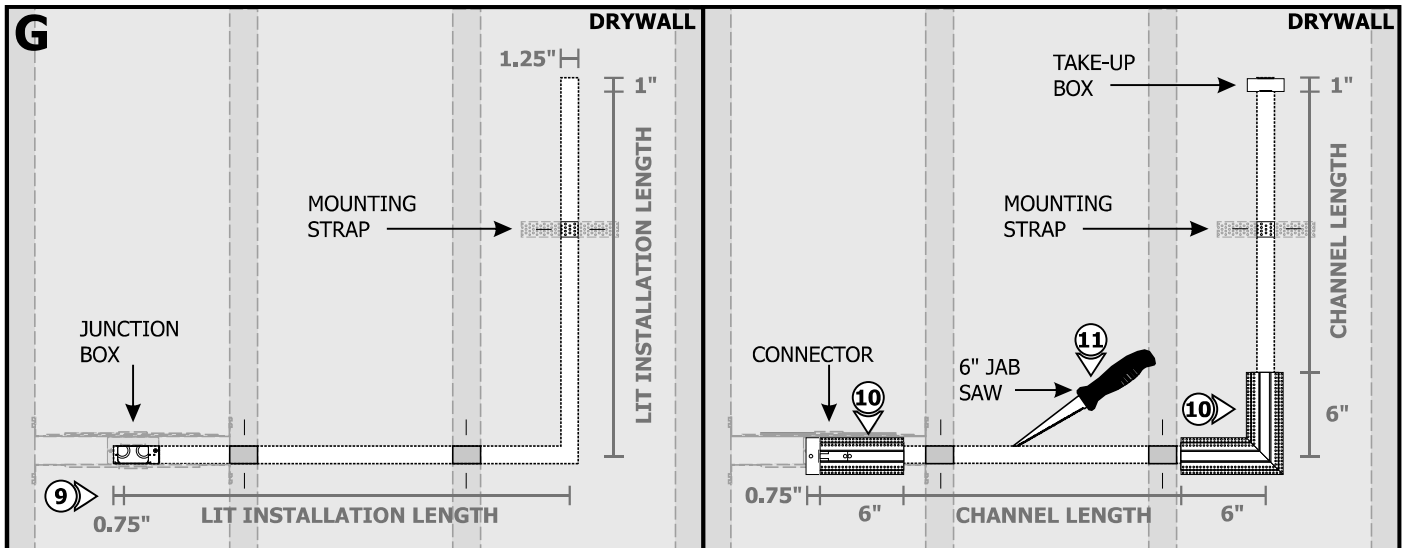
7: Place all wire nut connections inside the junction box.

CAUTION: Unroll the entire LED strip from the reel and use the power connector to power the strip making sure there is no outage before continuing with the installation. Afterwards, carefully roll the LED strip loosely back into the reel.

F

DRYWALL

6" FIXED ——▶
JAB SAW

⑧

8: Cut a section of drywall using a 6" fixed jab saw or other appropriate tool to expose the mounting plate area. Install the drywall.

NOTE: Drywall must be installed first before installing the channel.

G

DRYWALL

1.25"

1"

MOUNTING STRAP →

LIT INSTALLATION LENGTH

JUNCTION BOX

⑨▷ 0.75"

LIT INSTALLATION LENGTH

DRYWALL

TAKE-UP BOX →

1"

MOUNTING STRAP →

CHANNEL LENGTH

CONNECTOR

6" JAB SAW

⑪

⑩

⑩

6"

0.75" | 6" | CHANNEL LENGTH | 6"

9: Mark the area where the installation will be located on the drywall using the junction box opening as a guide (MIN 1.25"). Allow for 0.75" extra space at junction box for power end caps (if any) and 1" at the end of the installation for the Take-Up Box.

10: Place the desired DIY Channel Connectors against the wall. Ensure the connector is aligned with the installation location. Mark the location of each DIY Channel Connector to determine the cut length of the channel and lens.

11: Cut out the marked area using a "Dremel Multi-Max" or a 6" Fixed Jab Saw. Mark the location of the studs on the drywall.

H

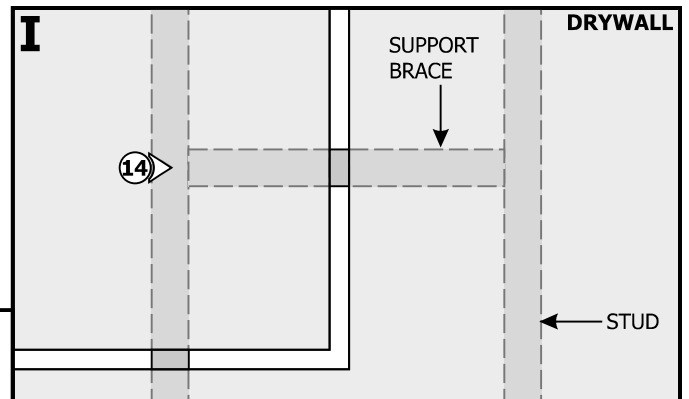DRYWALL

MOUNTING STRAP

DRYWALL SCREW →

⑫

⑬
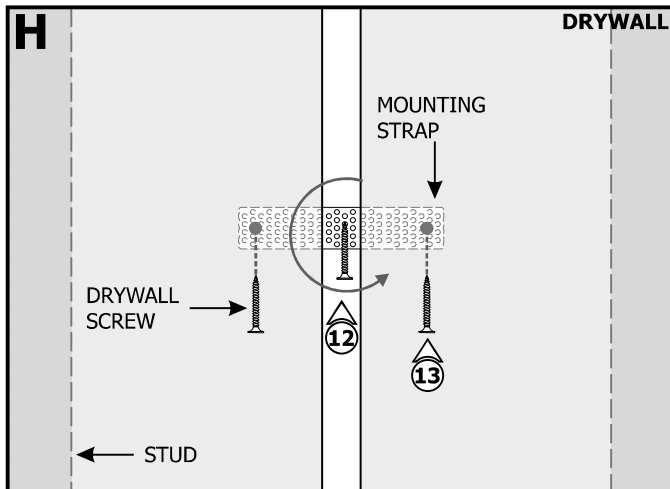
STUD ←

NOTE: To install channel in a wall without standard-spaced studs, install perforated mounting straps every 32" behind drywall and secure using two drywall screws. Mark the location of any mounting straps to the drywall (see steps below).

NOTE: For areas with lots of vibrations, it is suggest to install 2X4 support braces (suggested spacing is every 32") before installing and finishing drywall to avoid cracking of plaster. Refer to step 14.

12: Thread a drywall screw into the perforated material. Place the mounting strap behind the drywall and rotate into place using the drywall screw.

13: Secure the mounting strap to the drywall using two drywall screws. Mark the location on of the mounting strap on the drywall.

I

DRYWALL

SUPPORT BRACE

⑭▷

STUD ←

Alternate Installation Option:
14: Install 2x4 support braces (suggested spacing is every 32") before installing and finishing drywall.

Section Two: Install the Channel

J

LENS

②
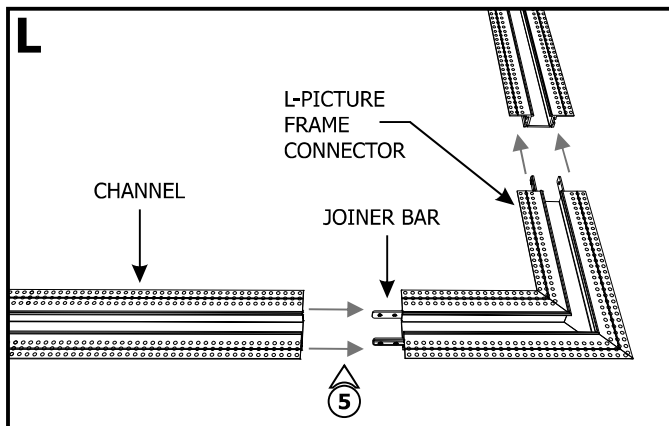
CHANNEL

WHOLE LENS

DIY CONNECTOR

◁ ①
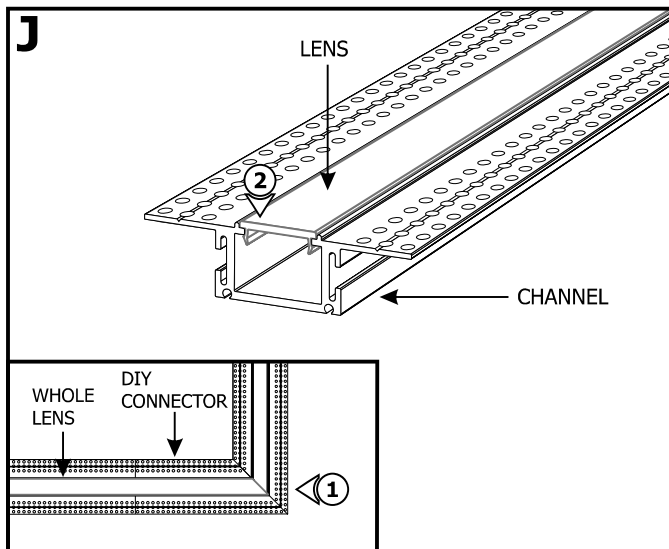
1: If necessary, consider attaching the DIY connectors to the channel before cutting to length.

2: Snap the whole lens into the channel, and DIY connectors, **BEFORE** cutting to length. This ensures a proper fit after installation.

K

CHANNEL

LENS

④ ▽ **CUT**

INSTALLATION LENGTH

LENS

③ ▽
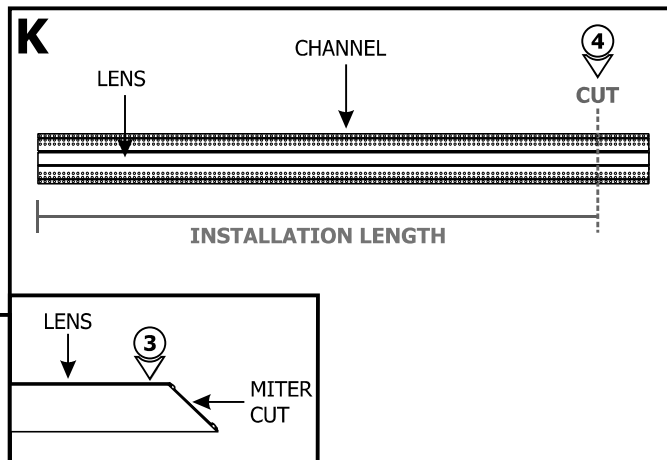
MITER CUT

3: Depending on the design, use the precut lenses provided with the DIY connectors as a guide to miter cut the lenses. Discard the precut lens.

**4:** Cut the channel and lens to match the installation length.

L

L-PICTURE FRAME CONNECTOR

CHANNEL

JOINER BAR

⑤ △

NOTE: TL1A L-Picture Frame connector is shown for demonstration purposes.

NOTE: If using the TL1A Power Feed Channel Connectors with Chicago Plenum Rated Junction Box, fill the connecting seams with plenum rated sealants.

5: Install channel connector(s) to the channels. Refer to the instructions provided with the desired DIY connectors.

6: Loosen (**Do Not Remove**) the two M3 set screws on the Take-Up Box using a 1.5mm Allen wrench.

7: Install the Take-Up Box at the end of an installation run. Slide the Take-Up Box into the channel and tighten the two M3 set screws using a 1.5mm Allen wrench to secure in place.

M

CHANNEL

⑦

⑥

M3 SET SCREW

TAKE-UP BOX

N

DRYWALL

#4-40 SCREW

#4-40 SCREW

⑨

⑧
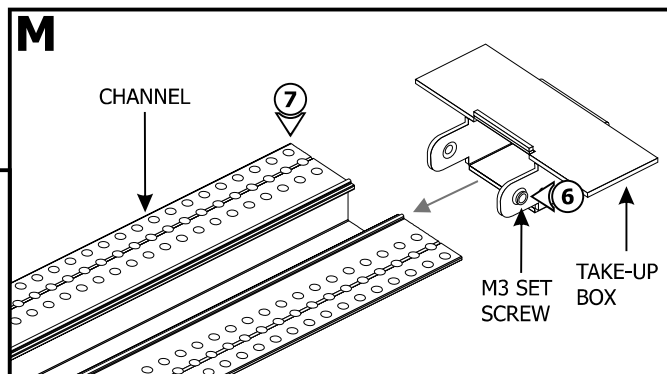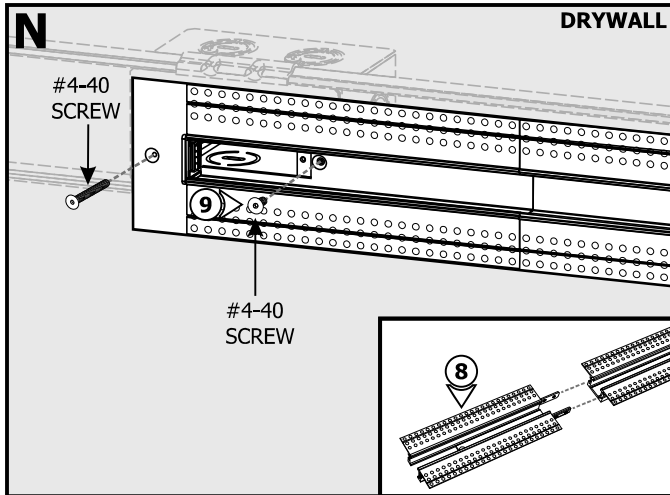
8: Refer to the instructions provided with the DIY Power Feed Connectors to connect the channels.

9: Secure the assembled DIY Power Feed Connectors to the junction box with the provided screw.

O

DRYWALL

CHANNEL

⑩   ⑩

⑩   ⑩

CHANNEL GROOVE

DRYWALL

CHANNEL

DRILL BIT

⑩

DRYWALL

CHANNEL

⑩

COUNTER SINK

**10:** Using the marked locations on the drywall, drill and countersink the channel using the provided square drill with countersink bit.

P

STUD

SCREW

⑪

GROOVE

⑪

GROOVE
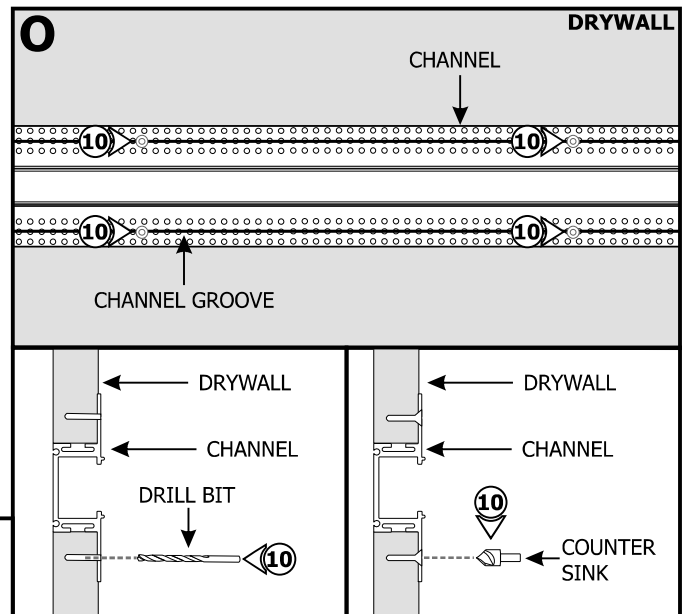
DRYWALL

11: Properly secure the channel to the wall using drywall screws (**DO NOT over tighten**). Ensure all screw heads are flush with the channel surface.

5
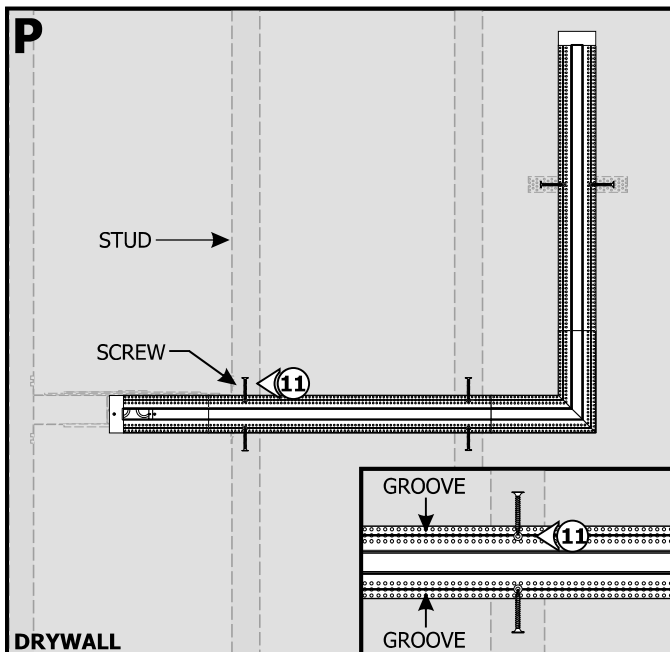
Section Three: Plaster, Sand and Paint

Q
DRYWALL

DRYWALL TAPE

CONTRACTOR'S TAPE

①
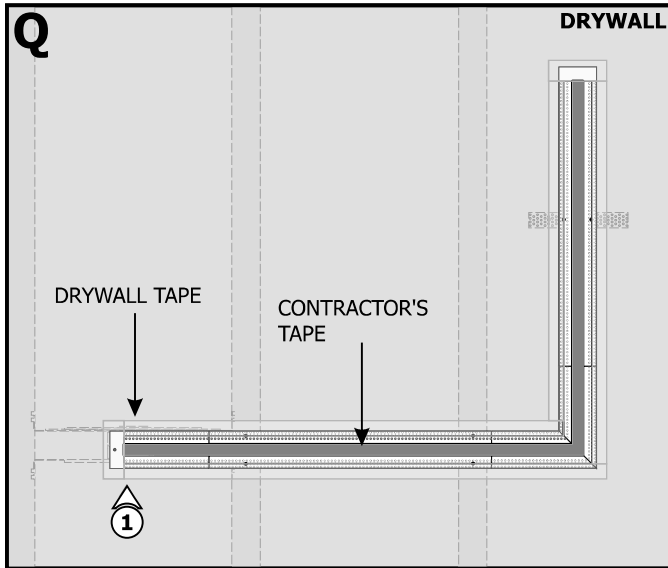
**NOTE:** Cover the channel opening with blue contractor's tape before plastering.

NOTE: For areas with lots of vibration, it is suggested to use Durabond to avoid cracking of plaster.

NOTE: Do Not use premixed joint compound "Soft Mud." No use compuesto para juntas premezclado "Soft Mud."

1: Must apply drywall tape (Ultra-Thin drywall tape suggested) along edges of channel up to the groove to prevent cracking of plaster after installation. **DO NOT** overlap strips of drywall tape.

R
COMPOUND KNIFE
②
CONTRACTOR'S TAPE

NOTE: Recommended plaster method: 1st Coat - Durabond 45 with 8" Blade, 2nd Coat - Easy Sand 45 with 10" Blade, 3rd Coat - skim coat with 12" Blade. Taper the plaster to blend with the surface.

2: Use a compound knife for a smooth compound spread. Sand, paint, and finish the plaster and drywall before removing the blue contractor's tape.

S
SCREW DRIVER
③
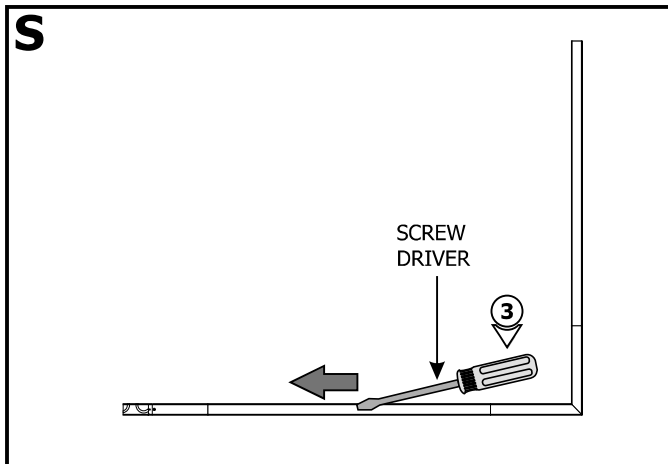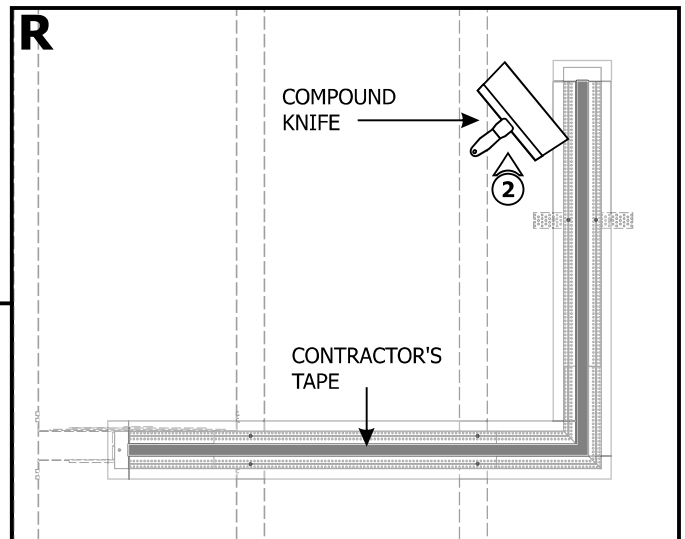
3: Carefully use a flathead screwdriver to remove excess drywall from the internal bevel/edge.

Section Four: Install LED Strip

T

② (with arrows)
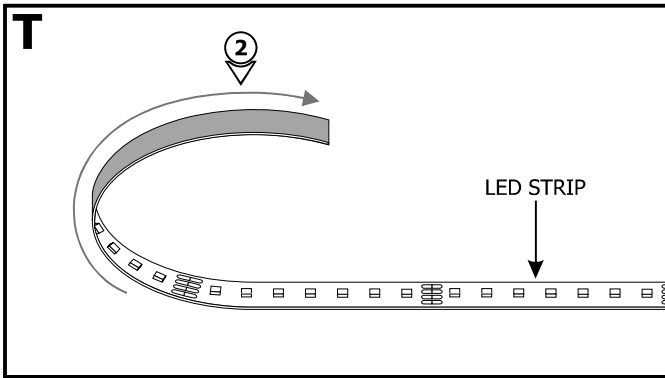
LED STRIP

1: Remove the blue contractor's tape from the inside of the channel. Clean the channel surface with alcohol to remove any dust or debris before continuing.

IMPORTANT: LED Strip may not properly adhere to channel surface unless the channel is cleaned with alcohol prior to application.

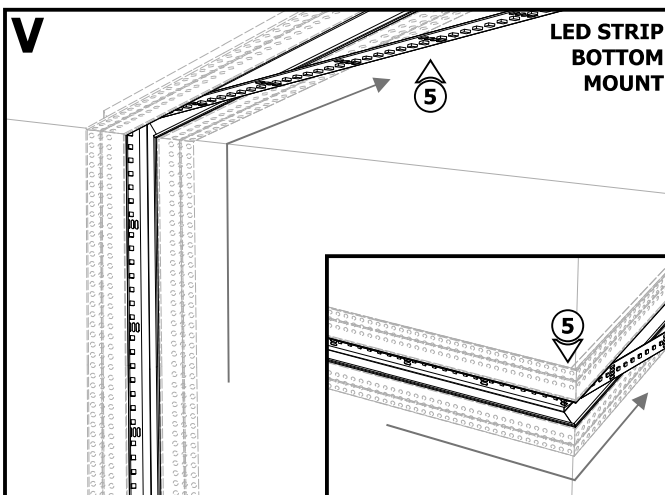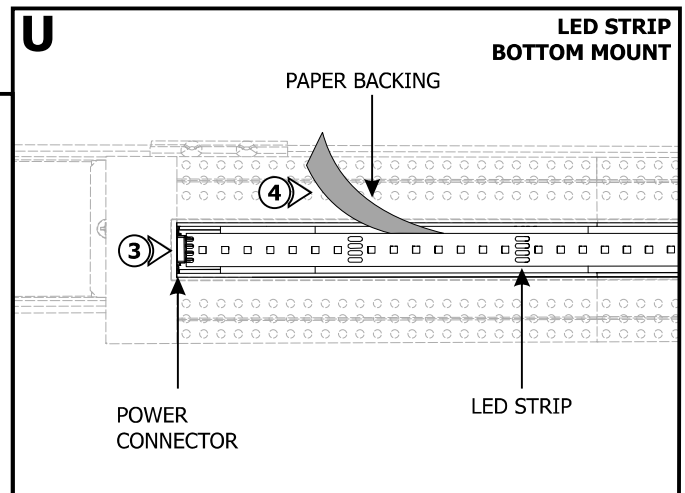**NOTE:** If installation requires RGB, RGB+W, or Tunable White, refer to wiring diagrams on pages 9 and 10.

2: Gently uncoil the LED Strip before applying to the channel otherwise the strip may lift off of the surface.

LED Strip Installation: Bottom Mount

3: Connect the LED Strip to the power connector. Refer to instructions provided with the DIY Power Connectors to connect the LED Strip to the power connector(s).

4: Carefully remove the backing from the LED Strip, making sure not to remove the tape. Firmly press down the adhesive portion of the LED Strip onto the channel surface while removing the rest of the backing, making sure there are no air bubbles that can cause surface irregularities.

NOTE: Refer to page 11 for important information regarding installation and rework of the LED Strip.

U

LED STRIP BOTTOM MOUNT

PAPER BACKING

③ ④

POWER CONNECTOR

LED STRIP

V

LED STRIP BOTTOM MOUNT

⑤

⑤

LED Strip Installation: Side Mount

6: Connect the LED Strip to the power connector.

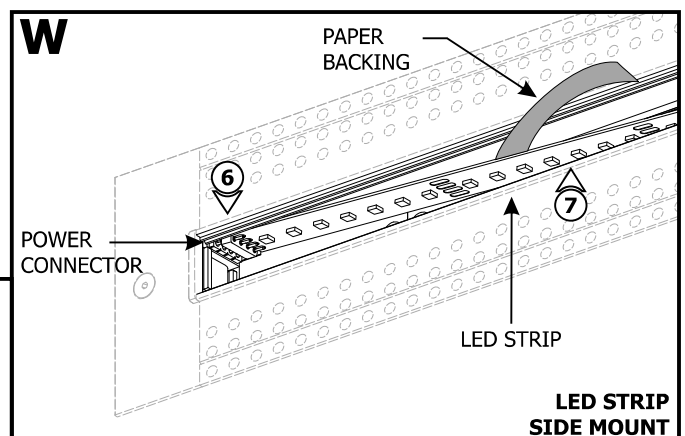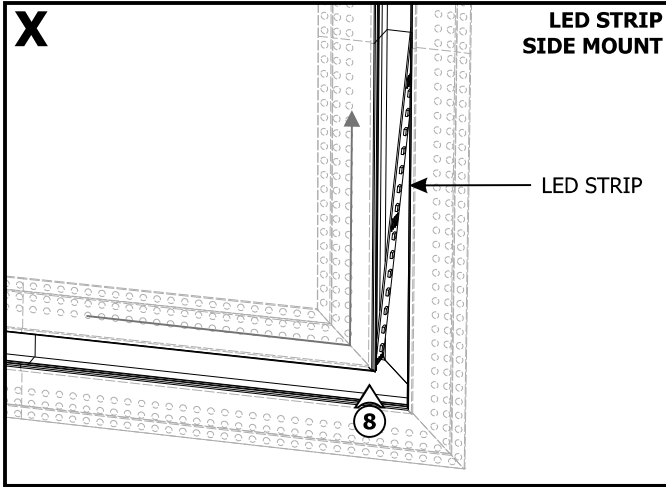**7:** Repeat step 4 to properly install the LED Strip on the side of the channel.

5: For Room Wrapping configurations, bend the LED Strip 90° on the **bottom** of the channel to match the corners.

W

PAPER BACKING

⑥ ⑦

POWER CONNECTOR

LED STRIP

LED STRIP SIDE MOUNT

X LED STRIP SIDE MOUNT

LED STRIP

⑧

8: For Picture Frame configurations, bend the LED Strip 90° on the **side** of the channel to match the installation corner.

Y

EXCESS LED STRIP

⑨

TAKE-UP BOX

TAKE-UP BOX

⑨

EXCESS LED STRIP

9: If required, trim the LED Strip on the dashed cuttable section and place the excess LED Strip inside the Take-Up Box. Ensure the entire length of the channel is covered with LED Strips to avoid unlit areas.

Section Five: Lenses

Z

LENS

LENS

①

LENS FULLY SEATED

①
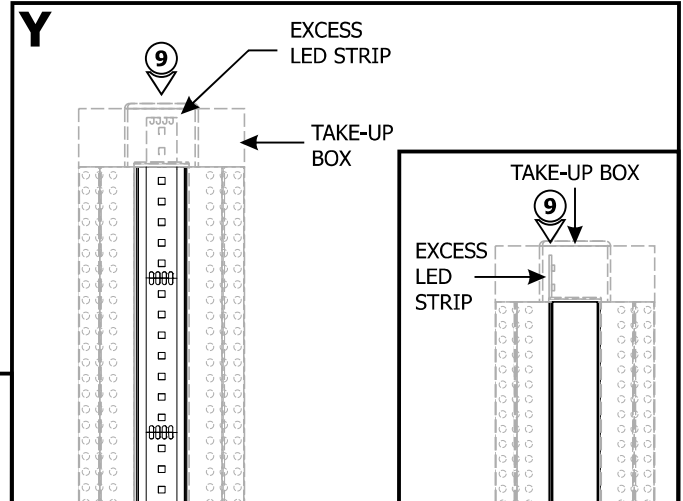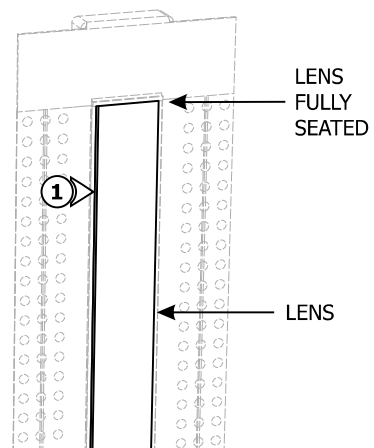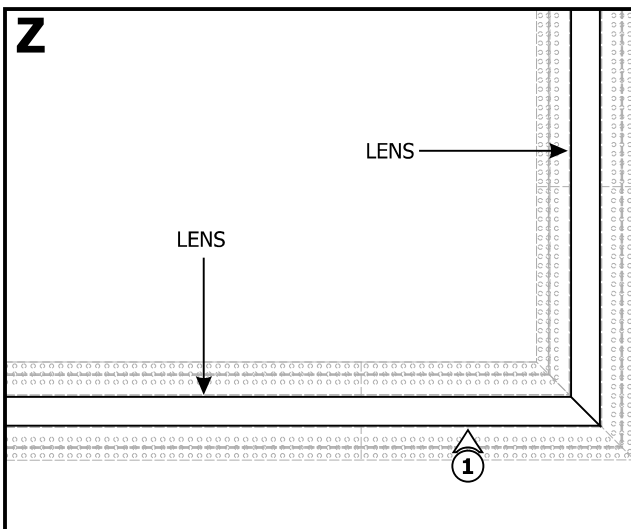
LENS

1: To avoid seams and light leaks, use the whole lens to cover the power connectors and the rest of the installed channels. Snap the lens onto the channel and connectors. Ensure the lenses are fully seated.

General Wiring Diagram

Static White Wiring

0-10V WIRES
IF NEEDED

GND

UNI POWER
SUPPLY

INPUT
120-277
VAC

N

L

+24V

-24V

+24V
RD

-24V
BK

**STATIC WHITE
24V LED STRIP/FIXTURE**

RGB Wiring

BK- RD+

CDMX1-RGBW

PSB-100W-24VDC-DMX

120-277
VAC

L

N

POWER SUPPLY

GND

+24V

-24V

120-277
VAC

L   N
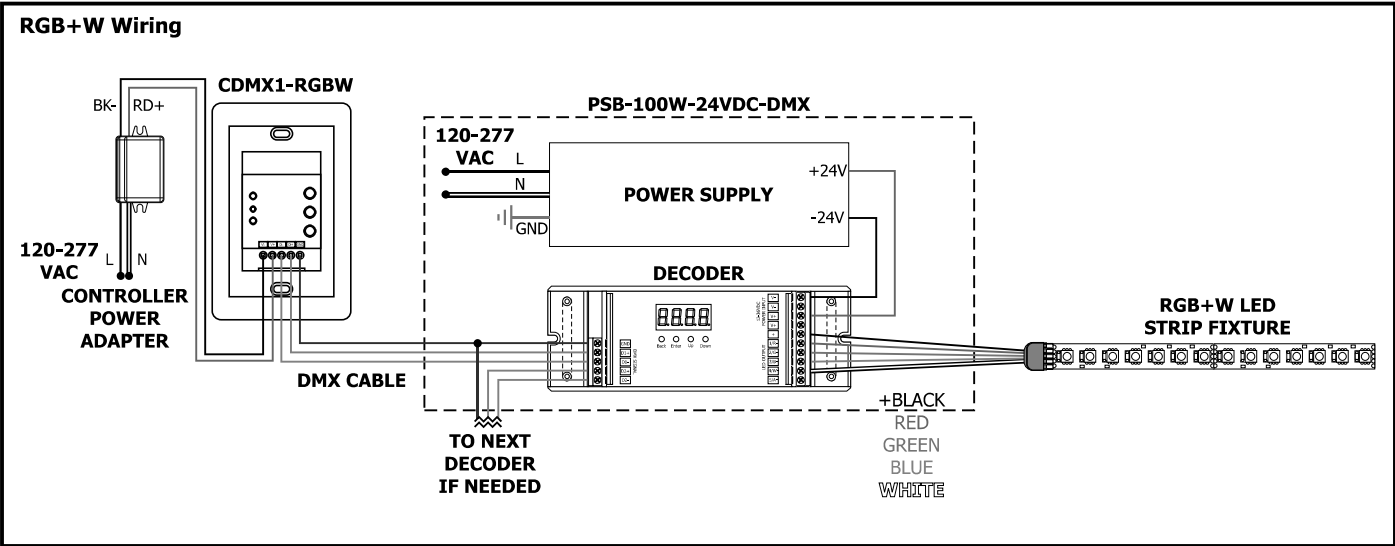
**CONTROLLER
POWER
ADAPTER**

DECODER

Back Enter Up Down

DMX CABLE

**TO NEXT
DECODER
IF NEEDED**

+BLACK
BLACK
RED
RED

**RGB LED
STRIP FIXTURE**

RGB+W Wiring

BK- RD+

CDMX1-RGBW

PSB-100W-24VDC-DMX

120-277
VAC

L

N

POWER SUPPLY

GND

+24V

-24V

120-277
VAC

L   N

**CONTROLLER
POWER
ADAPTER**

DECODER

Back Enter Up Down

DMX CABLE

**TO NEXT
DECODER
IF NEEDED**

+BLACK
RED
GREEN
BLUE
WHITE

**RGB+W LED
STRIP FIXTURE**

9

Tunable White: 2XK Power Supply with DMX Controls

BK- RD+

CDMX1-2XK

PSB-100W-24VDC-2XK

L
N

POWER SUPPLY

-24V
+24V

GND

120-277 VAC
L N

CONTROLLER POWER ADAPTER

DMX CABLE

DECODER

DMX DATA TO NEXT POWER/ DATA SUPPLY

TUNABLE WHITE LED STRIP FIXTURE

+2K or +27K RD
+6K RD
-2K or -27K BK
-6K BK
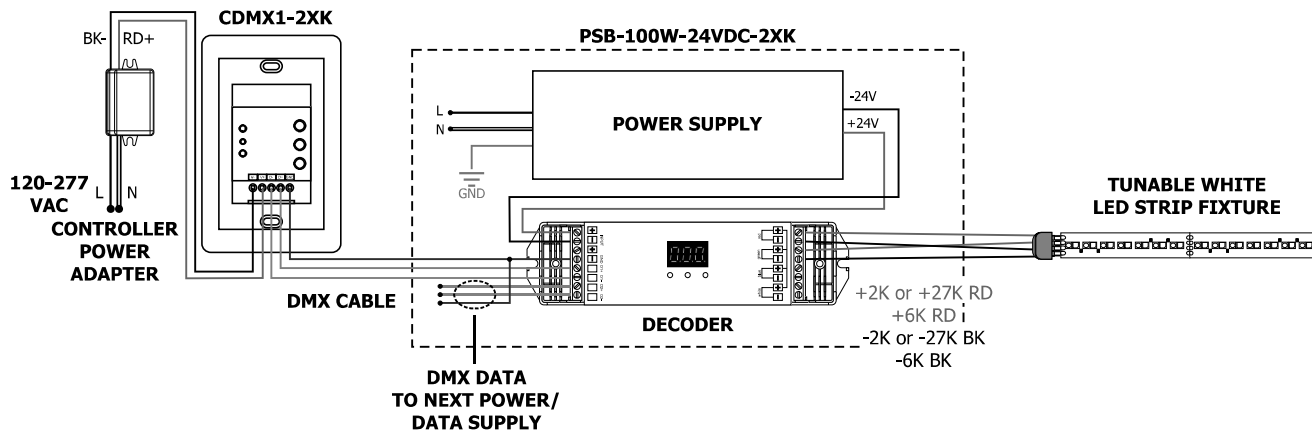
Tunable White: LED Power Supply with two Channel Controls, for Intensity and Color Temperature

+2K or +27K RD   -2K or -27K BK   -6K BK   +6K RD

WARM+ YELLOW
VIN1+ RED
VIN1- BLACK
WARM- BLUE
COOL- BLUE
VIN2- BLACK
VIN2+ RED
COOL+ YELLOW

DIMMING MODULE

COLOR TEMP
INTENSITY

PUR +
GY -
GY -
PUR +

24VDC+
24VDC-

24V POWER SUPPLY

L
N
GND

TUNABLE WHITE LED STRIP FIXTURE

WARM+ YELLOW
VIN1+ RED
VIN1- BLACK
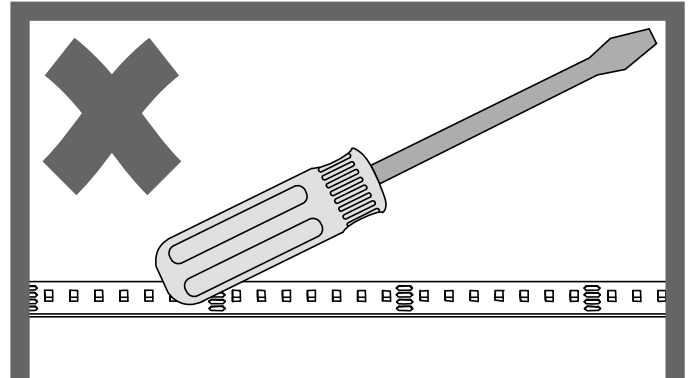WARM- BLUE
COOL- BLUE
VIN2- BLACK
VIN2+ RED
COOL+ YELLOW

COLOR TEMP
INTENSITY

PUR +
GY -
GY -
PUR +

24VDC+
24VDC-

24V POWER SUPPLY

L
N
GND

PSB-96W-010-24VDC-2XK

INPUT: 120-277VAC   LINE

TO POWER SUPPLY   LOAD

0-10V CONTROLLER
CONTROL INPUT 1
(DIMMING INTENSITY)

0-10V CONTROLLER
CONTROL INPUT 2
(DIMMING COLOR TEMP)

DO gently pull up and away from the soft strip if removing to reposition. This avoids damaging the strip.

DO NOT pull the strip back towards itself. Doing so risks damaging the strip and making it not function.

DO only ever use fingers to gently install soft strip to a surface **AFTER** cleaning the surface with alcohol.

DO NOT use any tool to install soft strip to a surface. This will damage the soft strip component.

Relocating LED Strip (Optional)

Z1

REMOVE LED STRIP TO RELOCATE

LED STRIP

ADHESIVE TAPE

ADHESIVE TAPE

①

APPLY ADHESIVE REMOVER AND THEN BUFF OFF

ADHESIVE

② ADHESIVE BACKING

BACK SIDE OF LED STRIP
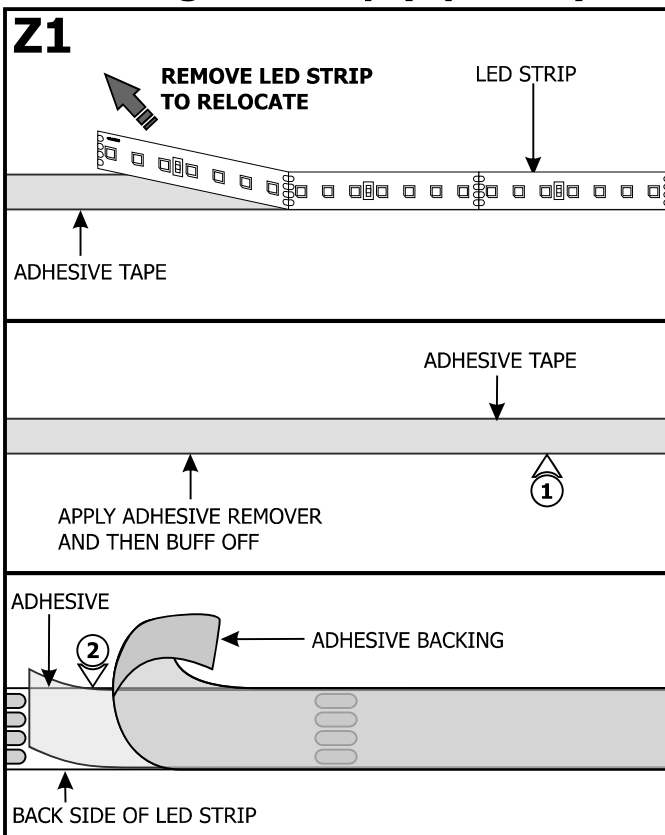
NOTE: If relocating the installed LED strip, make sure that the adhesive tape on back of the LED strip covers the entire strip. The adhesive tape isolates the strip from the installation surface. Damaged or inconsistent adhesive tape may cause the contacts on the back of the strip to come in contact with the conductive heat sink which will cause the strip to short and burn. Call PureEdge Lighting to get replacement adhesive tape and/or optional aluminum heat sink tape (SS-HR-F).

1: To remove tape residue from back of the strip, apply WD-40, Goo Gone, or a mixture of warm water and lemon oil to the corner of a clean, dry towel. Gently buff the area containing the adhesive residue until it is completely removed.

2: Gently remove a few inches from one side of the tape backing. Attach the adhesive tape to the back of the LED strip and apply moderate pressure to affix the tape. Continue this step a few inches at the time until the entire adhesive tape is attached to back of the LED strip.

3: Refer to Section Four to reinstall the LED Strip.