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WARNING!

DISCONNECT INCOMING POWER BEFORE CUTTING OR CONNECTING TAPE SECTIONS, OR CONNECTING POWER SUPPLY AND CONTROL, OR WHILE MOUNTING TAPE. CONNECT POWER ONLY AFTER ALL CONNECTIONS HAVE BEEN MADE. DISCONNECT POWER AGAIN IF ANY ADJUSTMENTS ARE TO BE MADE.

Read Before Installing:

The following safety tips and alerts will insure a safe installation, and will prolong the life of the system.

- READ ALL INSTALLATION INSTRUCTIONS BEFORE BEGINNING: IF NOT QUALIFIED, DO NOT ATTEMPT INSTALLATION. CONTACT A QUALIFIED ELECTRICIAN.
- INSPECT THE PRODUCT FOR DAMAGE OR IMPERFECTIONS. DO NOT USE IF DAMAGED. RETURN IT TO PLACE OF PURCHASE FOR A REPLACEMENT KIT.

Installing this product with disregard to the instructions herein can be dangerous and will void warranty.

- THIS TAPE IS NOT MEANT TO BE COVERED UNLESS WITH LENS FROM A CERTIFIED GM LIGHTING MOUNTING CHANNEL.
- DO NOT APPLY POWER TO LED TAPE WHILE IT IS STILL ON REEL.
- THIS TAPE IS FOR **INDOOR USE ONLY**. DO NOT USE TAPE OUT DOORS, ADJACENT TO LIQUIDS OR WHERE CONDENSATION MAY FORM. DO NOT USE IN BATHROOMS CLOSE TO SHOWERS AND SINKS. DO NOT SUBMERGE IN LIQUID OR GET WET.
- DO NOT ROUTE CORD OR TAPE THROUGH WALLS, CEILINGS, DOORS, WINDOWS OR ANY SIMILAR PART OF BUILDING STRUCTURE. SPECIFIC CMP RATED CABLES ARE AVAILABLE FOR ROUTING LOW VOLTAGE (24V) POWER THROUGH WALL AND CEILING SPACES.
- SECURE LED TAPE USING ONLY THE ATTACHED DOUBLE-STICK ADHESIVE STRIP AFFIXED TO BACK OF LED TAPE.
- DO NOT INSTALL TAPE WHERE IT CAN BE EASILY DAMAGED.
- DO NOT SECURE TAPE OR ITS CORD WITH STAPLES, NAILS, OR OTHER PRODUCTS THAT MAY DAMAGE THE OUTER JACKET OR CORD INSULATION.
- INSPECT PRODUCT AND INSTALLATION PERIODICALLY.

Use Only Recommended LineDrive Power Supplies or Controllers for Proper Operation.
See LTR-S-COB-RGBTW Spec Sheet.
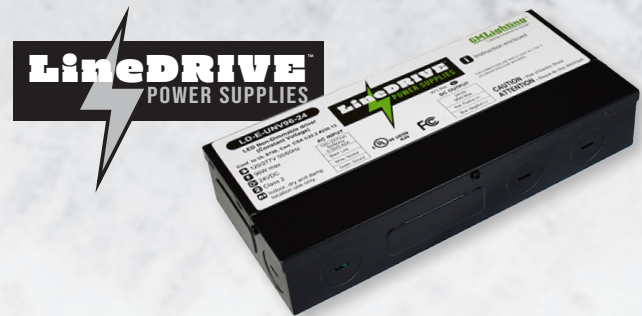
Planning Your Layout:

Make sure that the power supplies and controllers can be located in close proximity to the start of your run. Depending on the size of the layout, the space will need to allow room for all of the components required. See controller details for specific information. Use a tape measure to estimate LED tape lengths where you want to install your LED tape. Make a list of sections required, making allowances for the space that corners and connectors may need.

LED Circuit Definition:

In these instructions, the term "LED circuit" refers to a LED tape circuit consisting of one or more LED tape lengths that carry a single, low voltage load of less that 16'-4" in length. This includes corners. For longer runs, the LED tape sections must be separated into smaller circuits. This keeps each circuit within the low voltage, Class 2 parameters for safe operation. For larger applications, many circuits can be used together.

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IMPORTANT TIPS: The LTR-S-COB-RGBTW tape must be mounted first to the building with electrical connections done after tape is secured. Clean surface where you are applying tape to make sure it is free of dust and any debris. Mark locations where channels are to be installed.

Determine location of junction box being used. Location should be in an area where power supply will not be disturbed when installed. Avoid using the same AC power circuits that also have high power appliances plugged in to reduce possible electrical noise.

TOOLS NEEDED:
• Phillips screwdriver
• Tape measure
• Marking pen / pencil
• Wire strippers
• Scissors
• Wire connectors

PARTS INCLUDED:
• 16'-4" Reel of LTR-S-COB-RGBTW LED Tape
OPTIONAL PARTS:
• 18-6-WIRE in-wall rated cable
• Left or Right Flat Corner Sections
• RF Controller System
• DMX Controller System
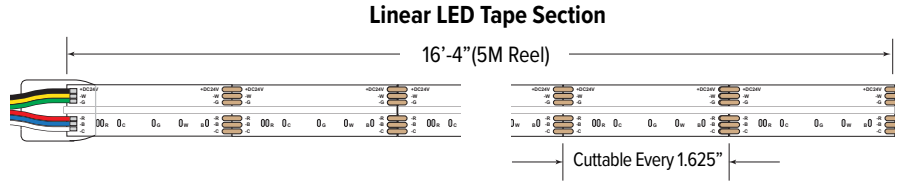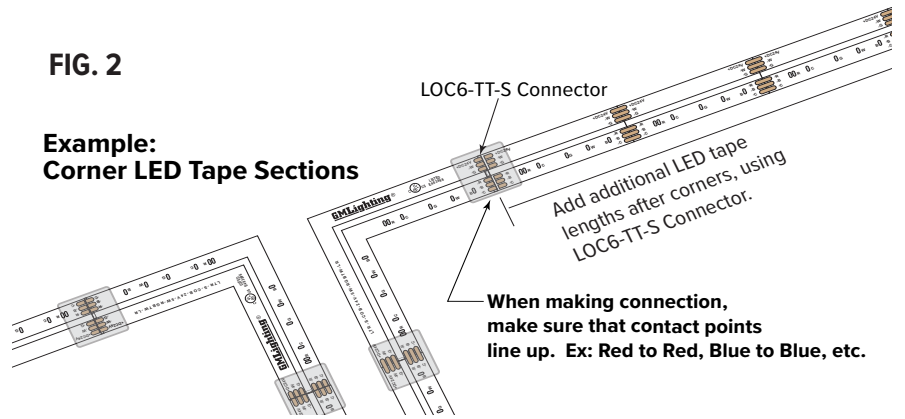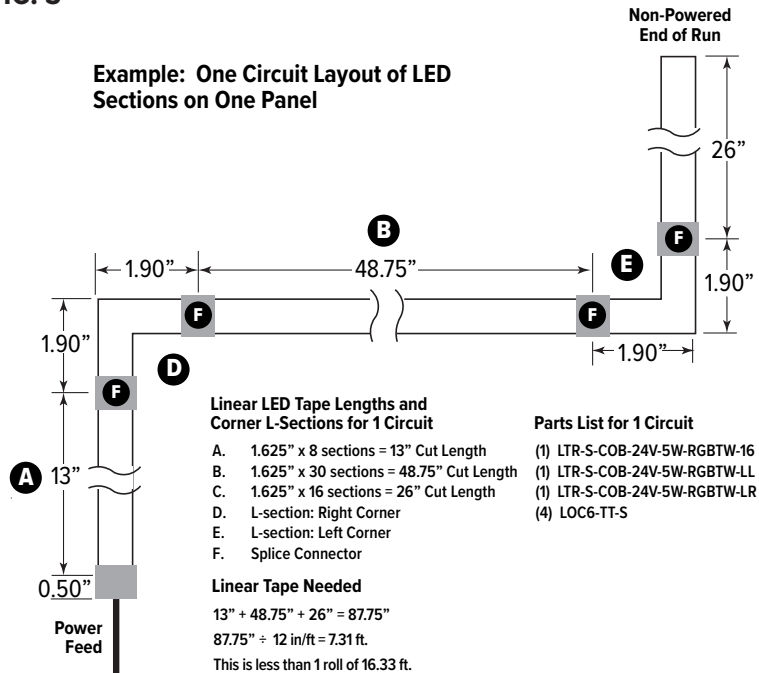• 24V Power Supply
• Aluminum Mounting Channel

LAYING OUT A LED TAPE CIRCUIT:

1. Plan a layout starting near the power supply, working toward the non-powered end within one flat wall or ceiling panel. If your layout calls for multiple ceiling and wall combinations, layout one panel at a time. Multiple panels may be on **1** circuit of LED tape but are best separated into different circuits for ease of installation.

2. This method is used for direct application of LED tape or use in channels. Start with one LED corner section location and determine the number of LED linear sections between the next corner section to get the best fit.

3. Make final adjustments to your layout to fit the cut increments of the tape **(Fig 1)**. Repeat this step for other LED linear sections between corners **(Fig. 2 and 3)** (other shapes include rectangles, squares or zig-zag patterns with square corners).

4. Determine the additional linear tape lengths at outer sections attached to only one corner section **(Fig. 3)**.

5. Make your parts list for the circuit including linear LED tape, corners and accessories like tape to tape splice connectors or connectors with cables.

6. Repeat steps **1** through **4** for other circuits.

7. When installing LED in approved channels, layout the LED tape sections first and size the channel section lengths to fit the tape **(Table 4)**. See specific channel specifications and instructions for details for certain features **(Fig. 4)**.

IMPORTANT: REVIEW 'ATTACHING TAPE TO CONNECTOR ON CABLE' AND 'ATTACHING TAPE TO TAPE SPLICE CONNECTOR' ON NEXT PAGE BEFORE PROCEEDING WITH ASSEMBLY.

FIG. 1

Linear LED Tape Section

16'-4"(5M Reel)

Cuttable Every 1.625"

FIG. 2

LOC6-TT-S Connector

Example: Corner LED Tape Sections

Add additional LED tape lengths after corners, using LOC6-TT-S Connector.

When making connection, make sure that contact points line up. Ex: Red to Red, Blue to Blue, etc.

FIG. 3

Example: One Circuit Layout of LED Sections on One Panel

Non-Powered End of Run

26"

1.90"

48.75"

1.90"

1.90"

1.90"

13"

0.50"

Power Feed

Linear LED Tape Lengths and Corner L-Sections for 1 Circuit

A. 1.625" x 8 sections = 13" Cut Length
B. 1.625" x 30 sections = 48.75" Cut Length
C. 1.625" x 16 sections = 26" Cut Length
D. L-section: Right Corner
E. L-section: Left Corner
F. Splice Connector

Linear Tape Needed

13" + 48.75" + 26" = 87.75"
87.75" ÷ 12 in/ft = 7.31 ft.
This is less than 1 roll of 16.33 ft.

Parts List for 1 Circuit

(1) LTR-S-COB-24V-5W-RGBTW-16
(1) LTR-S-COB-24V-5W-RGBTW-LL
(1) LTR-S-COB-24V-5W-RGBTW-LR
(4) LOC6-TT-S

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LTR-S-COB-RGBTW-Inst_030524

Installing LED Tape
in Channels

FIG. 4

Measure channel inside length. Verify channel will fit tape and connectors.

LED Tape should be installed along center of channel for best light fill.

Measure inside channel width. Verify channel will fit tape and connectors.

Overhead View:
90° Corner

Side View

Use flathead screws fasten channel.

45° Cut (Miter Cut Shown)

GM Channels Compatible with LTR-S-COB-24V-5W-RGBTW

CHANNEL FAMILY	CHANNEL PART SERIES
Extra Deep	LED-CHL-XD
Extra Deep Flange	LED-CHL-XD-F
45* Large Angle Mount	LED-CHL-45-1200
Wide	LED-CHL-W
Mud-In Standard	LED-CHL-MI-STD

Cut Here

LTR-S-COB-RGBTW Detail
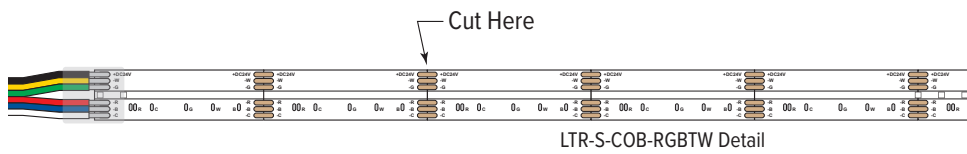
## ATTACHING TAPE TO CONNECTOR ON CABLE

FOR LOC6-TT-3/6/12/24/36/60

1. Line up end of connector to edge of tape making sure that contacts labeled +DC24V aligns with Black wire.

2. DO NOT CONNECT IF THEY DO NOT LINE UP. FLIP TAPE AROUND IF NECESSARY. DO NOT FLIP CABLE. MAKE SURE THAT CABLE WIRES LOOK LIKE THEY DO BELOW (IN GREEN), WITH BLACK ON TOP.
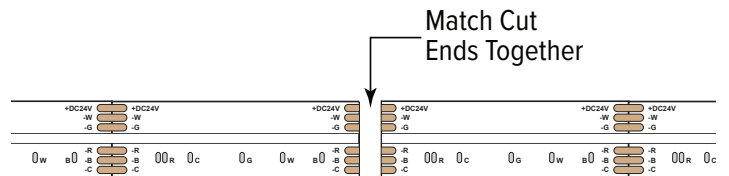
ATTACHING TAPE TO TAPE SPLICE CONNECTOR

FOR LOC6-TT-S

1. Line up edge of both lengths of tape, or length of tape and L-Connector, in both sides of connector. Align +24V to +24V.

2. REFER TO INSTRUCTIONS ON PAGE 3 FOR PROPER CONNECTION PROCESS (FIG. 7 AND FIG. 8).
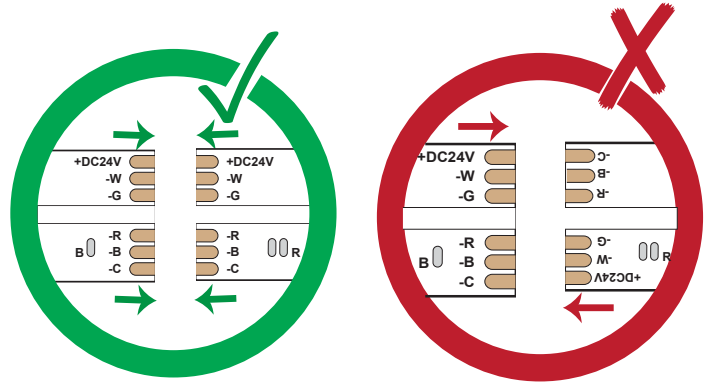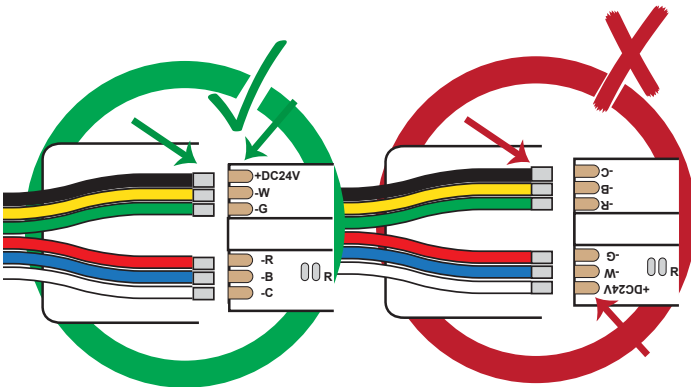
LED LEAD	WIRE COLOR
+24V	BLACK
WARM WHITE	YELLOW
GREEN	GREEN
RED	RED
BLUE	BLUE
COOL WHITE	WHITE

Match Cut Ends Together

INSTALLING COB-RGBTW TAPE (Cont.):

APPLYING TAPE TO SURFACE AND/OR MOUNTING CHANNEL:

1. If you opt to lay tape down on surface without using a mounting channel, first remove the backing adhesive liner. Making sure that surface has been cleaned and wiped free of debris, lay tape down along desired path, pressing firmly to engage adhesive for a firm fit.

2. Use the same process to adhere tape to mounting channel by first removing backing adhesive liner. Make sure channel is free of debris, and starting at the end closest to your power feed, lay tape down into channel - pressing firmly **(Fig. 5)**.

USING TAPE TO CABLE CONNECTORS AND TAPE TO TAPE CONNECTORS

1. See right and wrong method to make connections on previous page. Insert cut edges of tape that you want to join together into open jaws of connector (they ship to you pre-opened). Using pressure from your fingers, close upper jaw until it snaps shut **(Fig. 6)**.

RUNNING LONG SECTIONS OF WIRE:

When the controller or decoder is a long distance from the LED tape, connect to each LED tape circuit by using 18AWG or larger wire to extend the cable on the tape. Use 18-6-WIRE-XXXFT or similar wire. DO NOT replace the multi-colored 6-wire cable attached to the connectors. Make sure that you are connecting each wire properly for each color LED channel when wiring both lengths together. **If running wire inside wall or ceilings, make sure wire is rated for application.**

INSTALL THE POWER SUPPLIES AND CONTROL SYSTEM

1. Determine wattage on each zone: Each foot of LED tape = 5W. Add up the number of feet and multiply by 5. Do this for each circuit in the zone. **(Example: 32 ft. x 5W/foot = 160 watts).**

IMPORTANT: The LED load will need to be divided into groups of less than 82 watts, which is 1 reel of LED Tape (16'-4"). 1 reel (82W) meets Class 2 guidelines for 1 circuit.

2. Determine the number of power supplies required: Since this is a Class 2 system, 96 watts maximum is the limit with most power supplies. For lower wattage, select a power supply that is close, but higher in wattage (Example: For 45W load, a 48W, 60W, 90W or 96W power supply is recommended). For larger wattages, divide the zone wattage by 96W. 200W or 300W drivers with multiple 96W outputs can be used also. **(Example: 160W [zone] ÷ 96W = 1.66 - round that up to 2 96W power supplies).**

3. Determine the number of controllers or decoders: Use 1 controller or decoder per 96W per the power supply above.
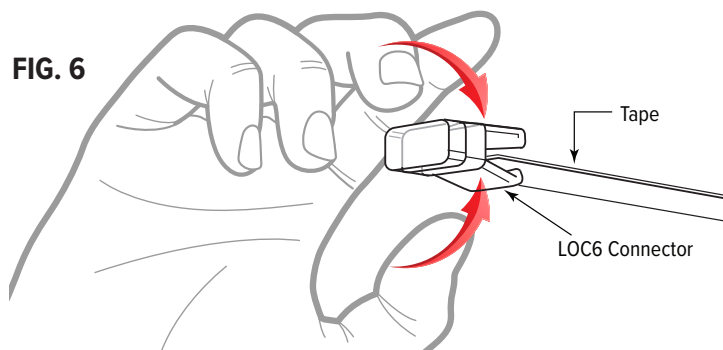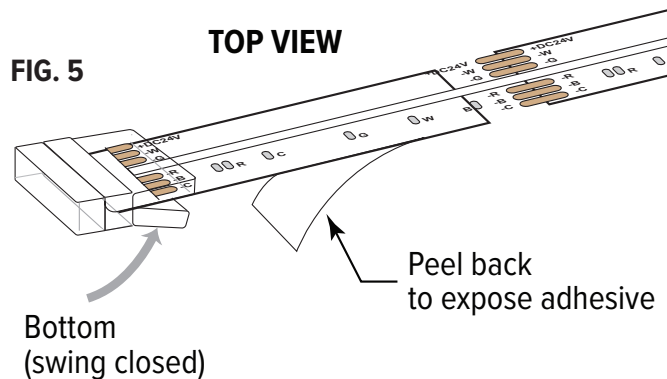**Ex.: For 2 power supplies, use 2 decoders or controllers.**

4. Consult Compatible Controllers Table for recommended GM Lighting controllers **(FIG. 4)**.

TOP VIEW

FIG. 5

Peel back to expose adhesive

Bottom (swing closed)

FIG. 6

Tape

LOC6 Connector

DETERMINE CONTROL SYSTEM TO BE USED
Consult Compatible Controllers Table for Recommended GM Lighting Controllers (TABLE 7).

Choose either the RF control or DMX control system to use the full capability of the RGBTW tape. See separate instructions for details on each system.

RF CONTROLLER: This is a basic option that is easy to install and can be used as a stand-alone system.

DMX CONTROLLER WITH BLUETOOTH APP AND DECODERS: This professional-grade operating system can be modified for use with a bigger system. A Bluetooth® app is available to enable advanced programming options. A Wi-Fi network or connection is not required for DMX control. **REFER TO THE GM LIGHTING DMX GUIDE BEFORE PROCEEDING.**

COMPATIBLE CONTROLLERS
TABLE 7

System	Catalog No.	Description
RF Control	HCCM-RF-RGBTW	RGBTW 5 Channel Controller with RF Remote with holder and mounting hardware
	RPT-RGBTW	5 Channel Repeater
DMX Control	DMX-LT-995	5-Channel DMX Decoder
	WC5-RGBTW-DMX-BT	Black Wall Control 5-Channel DMX, Bluetooth App (requires **LD-E-UNV8-12**)
	LD-E-UNV8-12	12V 8W Constant Voltage Driver 120V/277VAC In
	DMX-TR-5	DMX Terminator Resistor 120 Ohm, 1/4 Watt, 5 pcs

Ext