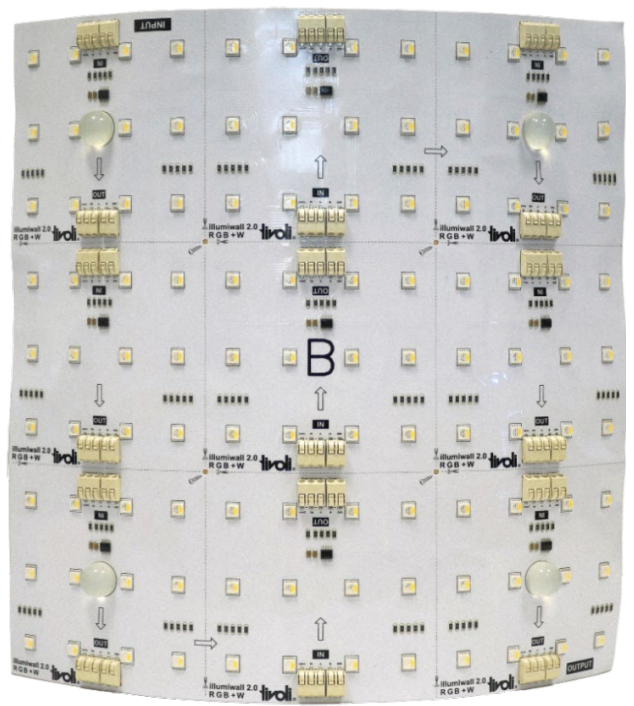
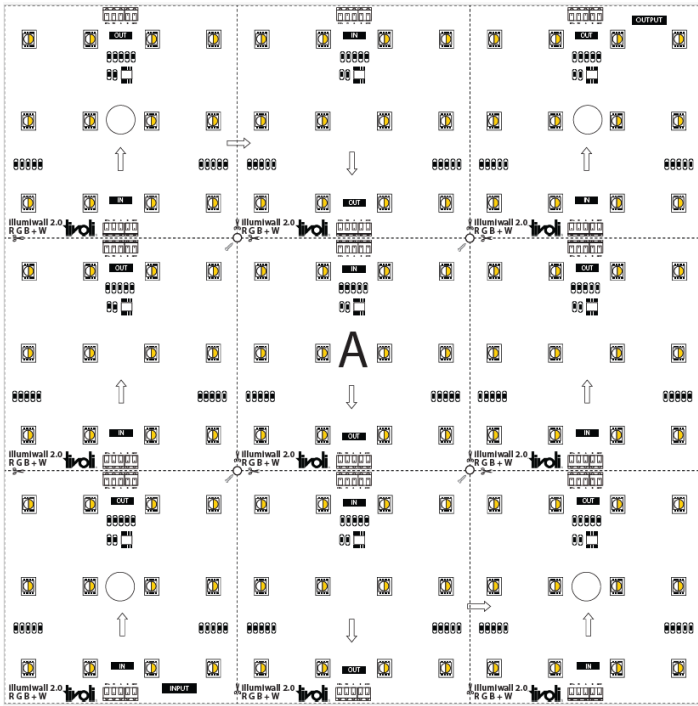


# IllumiWall 2.0 RGBW Installation



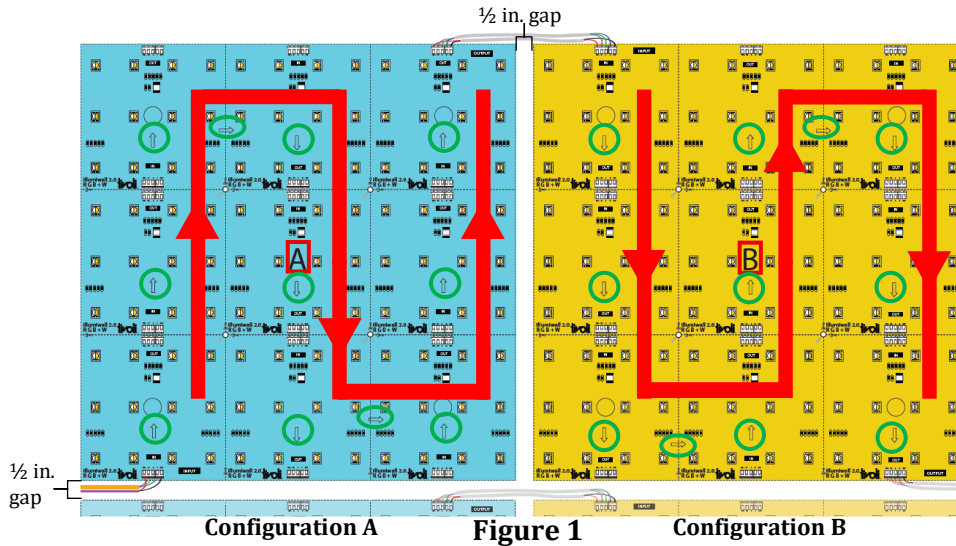
## Safety and Warnings

- Please verify the contents of the package!
- Please read instructions before starting the installation.
- Make sure power is off before installing or modifying the system.
- Call Tivoli LLC tech support with any questions.
- This product is designed to work with listed Class 2, 24V DC transformers only. Use of any other power source will cause damage, shorten the life of the fixture, and will void the warranty.
- Consult any local and national codes for installation.
- Follow basic safety precautions when dealing with any luminaire application to reduce the risk of fire, electrical shock, and/or personal injuries. This lighting system should be installed by a certified professional.
- **Do not** use this product for other than its intended use.
- **Do not** install this lighting system where the exposed bare contacts can be shorted or contact any conductive material to reduce the risk of fire and burns.
- **Do not** install any luminaire close to any combustible material.
- **Do not** use any luminaire if damaged, such as a broken globe, loose connections, or frayed wire insulation. Inspect periodically.
- **Do not** submerge any luminaire in liquid. Use waterproof connectors for all outdoor applications.
- **Do not** secure any luminaire with staples, nails or like means that might damage the wire insulation. Secure it by using screws through the base.
- **Do not** run any luminaire that exceeds its operating temperature.
- **Do not** hang objects from light string wires or extension cord.

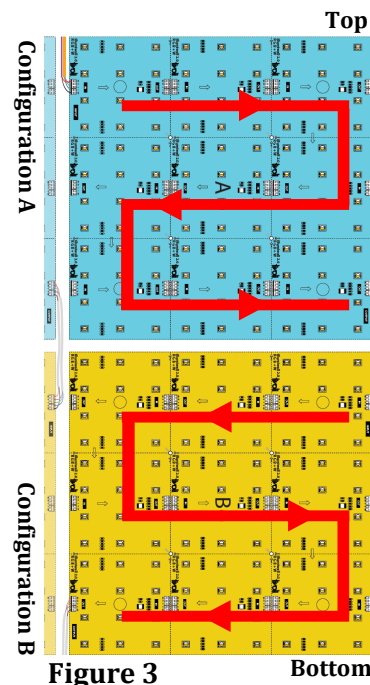
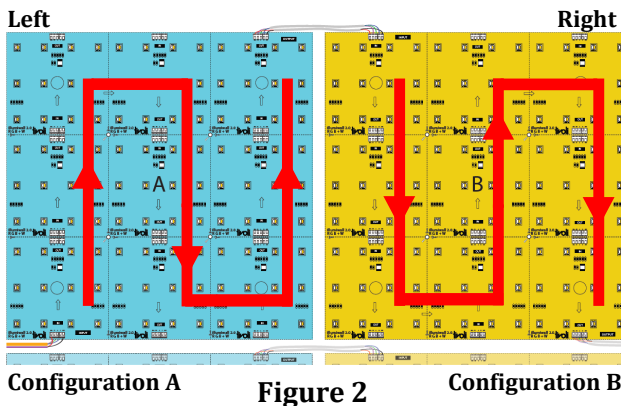
## Layout and Orientation

**ALL LAYOUTS MUST BE REVIEWED AND APPROVED BY TIVOLI BEFORE INSTALLATION.**

1. Ensure there are ½ inch gaps between each sheet for space for the wires to run through.
2. There are 2 configurations (A and B) of the sheets that define the data and power flow direction (Circled arrows are shown on the sheets below defining direction of circuit flow) [Figure 1].



3. Within each sheet, the sections are wired in sequence with the previous and subsequent sections via integrated traces within the flexible sheet.
  - a. Using an entire sheet only requires the power and data feeds to be connected once.
  - b. When using multiple sheets, it is necessary to jump from the 1<sup>st</sup> sheet to the 2<sup>nd</sup>, from the 2<sup>nd</sup> to the 3<sup>rd</sup>, etc.
  - c. For ease of wiring, alternate between Sheet A & Sheet B configurations to minimize interconnecting wiring.
  - d. Can orient sheets horizontally (Left to Right) [Figure 2] or vertically (Top to Bottom) [Figure 3].



## Cutting Sheet Instructions

If required, the sheets can be cut along the dotted lines (and in sequence) to prevent data and power interruption e.g.

- For a 2x2 section, cut out sections #2, #3, #4, & #5 or #5, #6, #7, & #8 [Figure 4].
- For a 3x1 section, cut out #1, #2, & #3; #4, #5, #6; or #7, #8, & #9 [Figure 5].

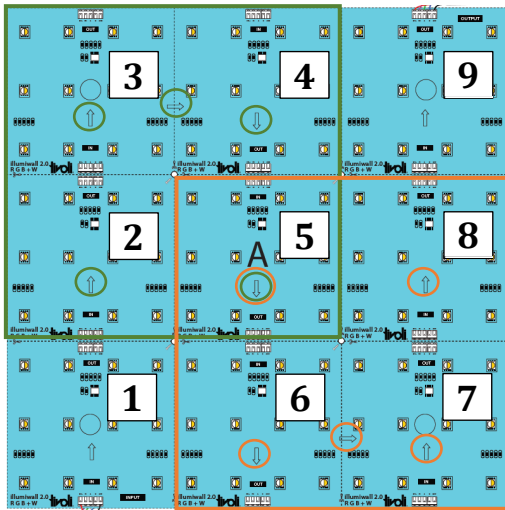


Figure 4 Configuration A

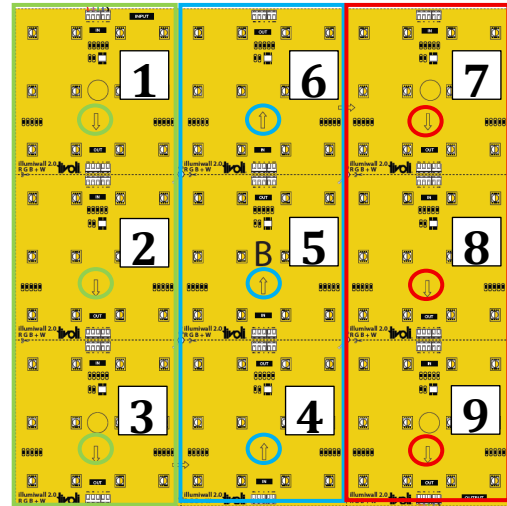


Figure 5 Configuration B

**NOTE:** If sheets are not cut sequentially, place jumpers (PO to PI) between the non-sequential numbered sections. For example, a 1-6-7 section requires jumpers between 1-6 [Figure 6]. In addition, a 1-2-5-6 section requires a jumper between 2-5 [Figure 7].

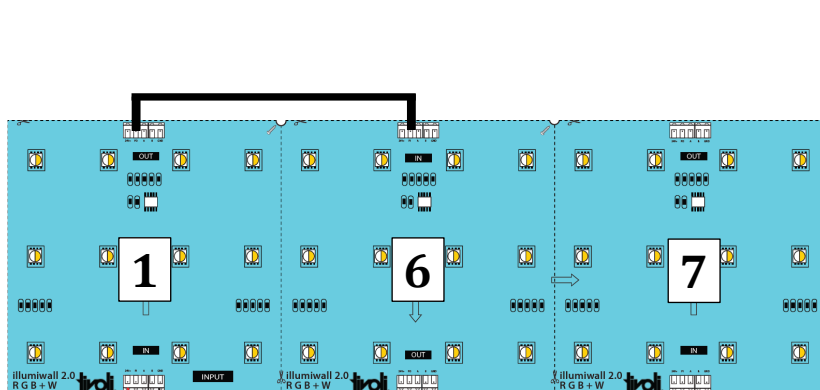
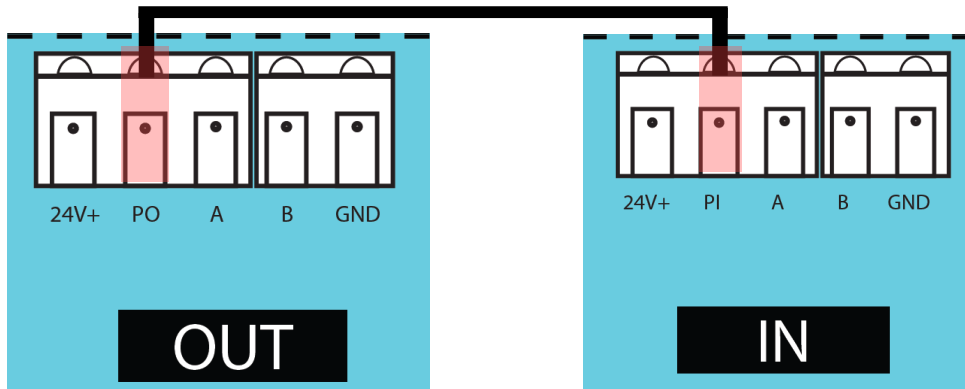


Figure 6

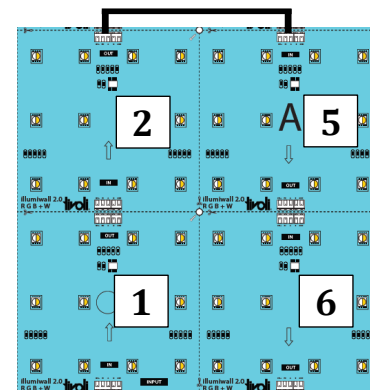
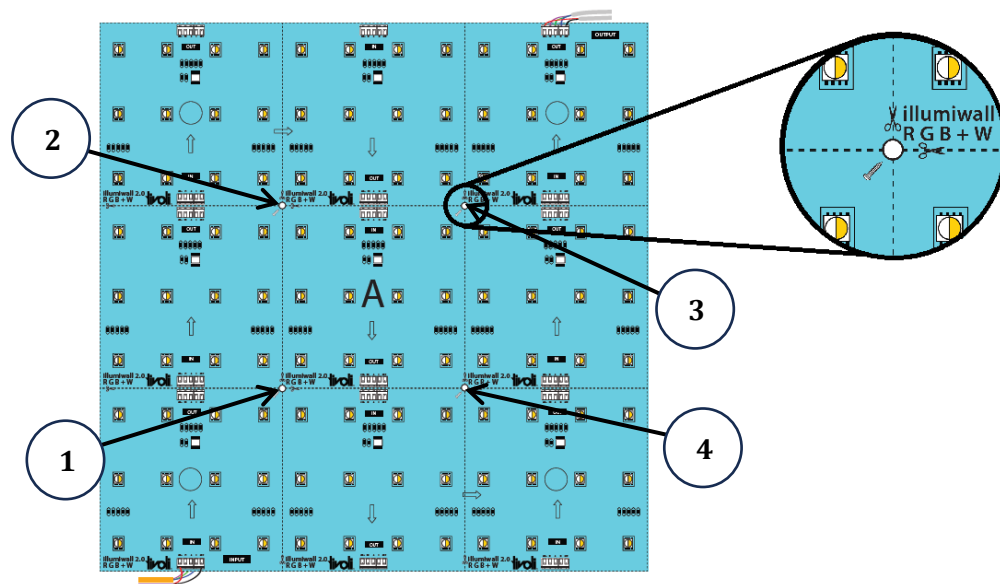


Figure 7

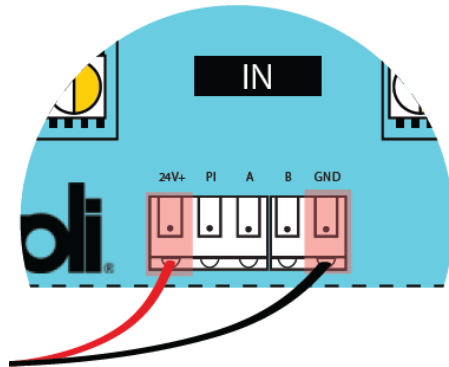
## Mounting Instructions

1. Prepare surface that you are mounting sheet to.
  - a. The adhesive on the backside of the sheets is quite strong and is very unforgiving with respect to allowing it to be manipulated once adhered, so using alignment marks on the substrate and/or temporary tape along the corners and edges of the sheets to ensure correct placement are key to a successful installation.
  - b. The surface of the substrate that you are adhering the fixture sheets to must be as clean, dry, flat, and smooth as practical, to ensure a good bond with the adhesive. Dust is a common issue on many installations, as once it bonds to the adhesive, the fixture sheet will no longer bond with the substrate material.
  - c. Keep the data & power wire bundles tight, secured against the substrate, and routed within the confines of the spaces between the sheets to avoid creating shadows.
2. Remove 3M adhesive from the back and attach to the mounting surface.
3. Use #6 pan head screws to secure the sheet onto the mounting surface. There are 4 screw holes in each sheet.

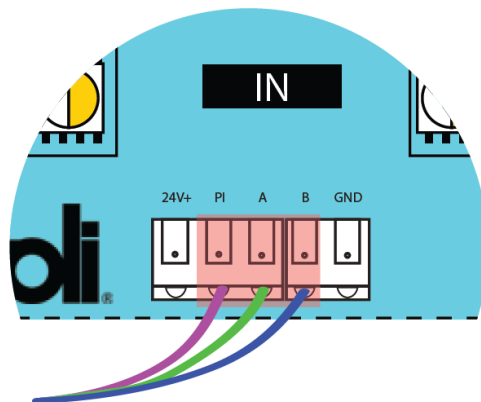


## Wiring Diagram

1. Connect power supply to power input (24V+ and GND). Use solid or stranded with wire ferrule conductive wires with gauge size between 18 and 22 AWG.
  - a. A 96W power supply can power up to 5 sheets. (Equivalent to 45x individual 4" x 4" squares)

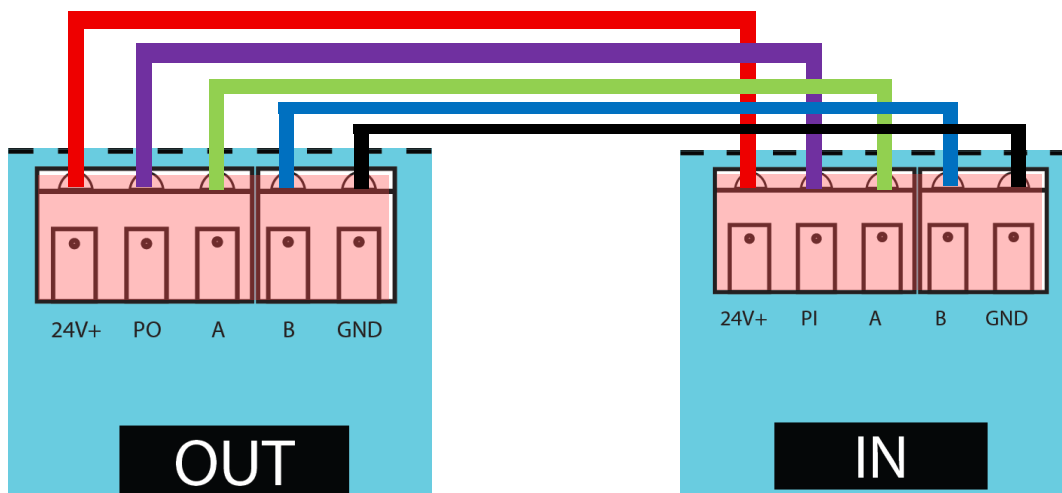


2. Connect DMX Controller to Data Input (PI, A, and B). Use solid or stranded wire ferrule conductive wires with gauge size between 18 and 22 AWG.
  - a. A DMX universe can contain up to 14 sheets.
  - b. Each 4" x 4" square is a controllable pixel RGBW



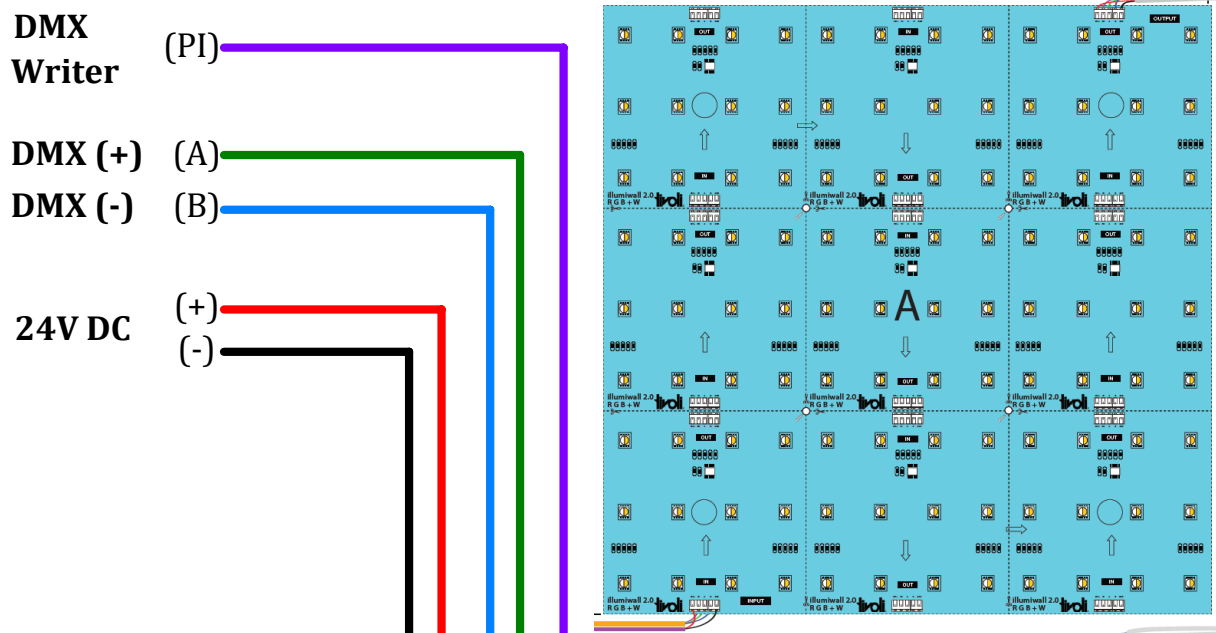
PI = Program In (Address Writer)  
PO = Program Out (Address Writer)  
A = Data Positive  
B = Data Negative

3. Connect each subsequent sheet.



## Wiring Diagram

4. Connect power/data lead to appropriate 24V DC power supply and connect data to DMX controller.
  - a. Refer to related power supply specification sheets for more information and other possible configurations.
  - b. Refer to the related documents of the selected DMX controller for instructions on installing and using it accordingly.
  - c. A dedicated proprietary DMX addressing device can be connected to the program I/O wire to address continuous runs or individual sheets of IllumiWall 2.0 RGBW tiles.



### DMX Information

Tivoli IllumiWall 2.0 RGBW sheet is a DMX direct to fixture controllable RGBW light engine configured as a 12x12 inch 9-pixel self-adhesive panel. DMX addressing is accomplished via a handheld proprietary DMX writing device. IllumiWall 2.0 RGBW sheets can be addressed via the handheld remote writer via DMX Data wires as well as the necessary PI/PO Program In/Out wire. After addressing is made and confirmed the PI/PO wire is no longer needed unless addressing needs to be re-written. Panels can be addressed before or after installation as individual sheets or as continuous runs once all jumper wires are installed. The start address and number of sheets can be controlled via the DMX writer as well as individual pixel within the IllumiWall 2.0 RGBW sheet can be addressed as needed. New installations that have not been addressed may display unusual and unexpected behavior until the addressing process is completed.