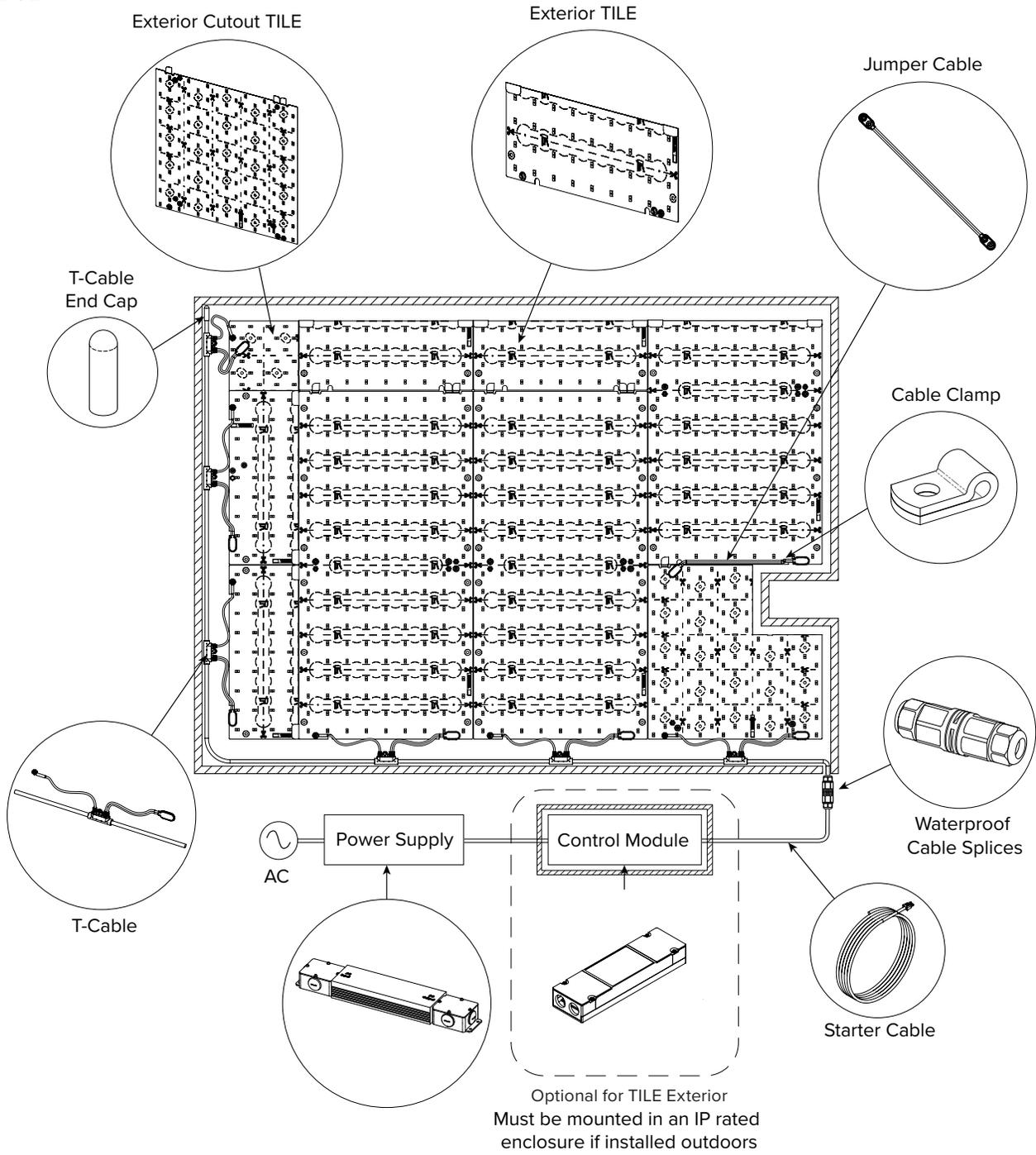


COOLEGE™

COOLEGE TILE R3 EXTERIOR INSTALLATION MANUAL



Caution: Observe precautions for handling electrostatic sensitive devices.



RoHS



5 Year Limited Warranty:
Parts and workmanship

Cooledge Lighting Inc.
110-13551 Commerce Parkway
Richmond, BC V6V 2L1 Canada

O +1 604 273 2665
F +1 604 273 2660
T +1 844 455 4448
W cooledgelighting.com

Cooledge Lighting reserves the right to change materials or modify the design of its product without notification as part of the company's continuing product improvement program.

1.0 Important Installation Notes	3
2.0 System Contents	3
3.0 Introduction to TILE Exterior	6
4.0 Care and Handling Guidelines	6
5.0 System Layout	7
6.0 Example Installation	8
7.0 Installation	10
7.1 Mount the 1st Run of Exterior TILES	10
7.2 Mount Additional Runs of Exterior TILES	14
7.3 Installing Pre-Cut Exterior TILES and Cutouts	15
7.4 Install the Last Run (if less than 11.8" (300mm) width)	16
7.5 Install the Last Corner	17
7.6 Install T-Cables	18
7.7 Disassembling TILES (if required)	19
7.8 Reuse of Input End of TILE (if required)	20
8.0 TILE Exterior Layout Guidelines	21
8.1 Calculating Maximum Run Length	22
8.2 Calculating Remote Power & Control Distance	25
9.0 Troubleshooting	29
10.0 Product Support	29
11.0 Warranty	29

1.0 IMPORTANT INSTALLATION NOTES

Please read instructions prior to installation

Installation must be completed by a qualified electrician in accordance with all national and local electrical and construction codes.

Ensure power is off prior to installation

TILE Exterior R3 products are IP65 rated only.

TILE Exterior R3 products must be powered by a Cooledge approved constant voltage Class 2 or LPS LED Driver. Using a non-approved power source could damage the system and will void the warranty.

TILE Exterior R3 should not be mounted where it will be exposed to prolonged direct sunlight. Install behind a suitable transparent or frosted cover to protect from UV damage.

TILE Exterior R3 should not be mounted on conductive surfaces.

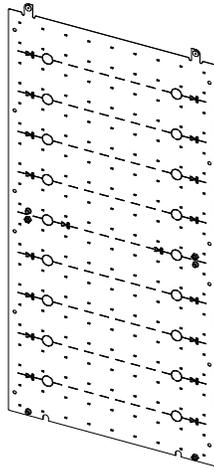
DO NOT CUT Cooledge TILE or Cutout Exterior. Cutting of the TILES will compromise the protective coating.

 DO NOT DISCARD the contents of the Installation Kit. All components will be needed to perform the installation.

2.0 SYSTEM CONTENTS

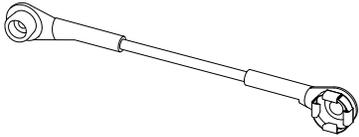
A. TILE Exterior	Light emitting sheets packaged in quantities of 1–50 pieces.
B. TILE Exterior Starter Kit:	Contains: (1) Quick Start Guide, (2) Splice Connectors, (4) T-Cable End Caps, (1) 16AWG (1.3mm ²) Starter Cable, 10ft (3m) long, for connection between Control Module and T-Cable. (4) Cut TILE Reuse Jumper Cables - see Section 7.8 (12) Insulating Patches
C. Power Supply:	Converts incoming AC power to 54VDC output.
D. Control Module	Converts incoming control signals to dim the TILES. The Control Module has one input connection from the Power Supply and up to 4 max. 90W output connections to TILES
E. TILE Exterior Cutout Kit (optional):	Contains a Cooledge Exterior Cutout TILE plus two (2) Cable Clamps, two (2) Jumper Cables, and two (2) Patches. Note: Cutout TILES are factory cut and sealed. Consult submittal documents to match the label on the TILE to the correct install location.
F. TILE T-Cable:	16AWG (1.3mm ²) 2-conductor jacketed cable with four (“T-4”) or ten (“T-10”) “T” connections consisting of a splice and two 18AWG (0.8mm ²) conductors with snap connectors. It is used to connect the Starter Cable to the TILES.
G. TILE Exterior Starter Cables:	10’ (3m) length 16AWG (1.3mm ²) cables for connection of the TILES to the Control Module or Power Supply.
H. TILE Exterior Extension Cables (optional):	14AWG (2.1mm ²) 2-conductor jacketed cable of 10’(3m) or 20’(6m) length to connect the Starter Cable to the Control Module (or Power Supply for installations less than 100 Watts) when a remote mounting distance greater than 10’(3m) is required.

A. TILE EXTERIOR

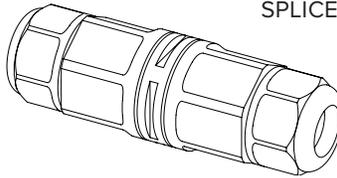


B. TILE EXTERIOR STARTER KIT

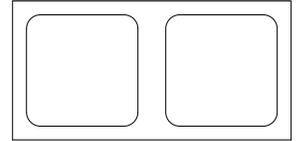
CUT TILE REUSE JUMPER CABLE
X 4



SPLICE CONNECTOR
X 4



INSULATING PATCHES
X 12

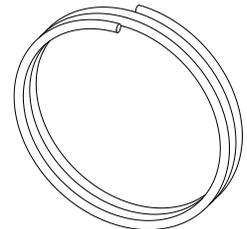


QUICK
START
GUIDE

T-CABLE END CAP
X 4

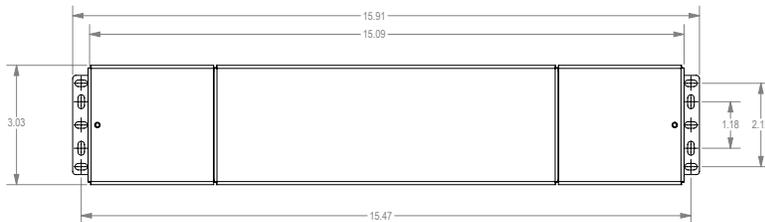


16AWG (1.3mm²) CONDUCTOR CABLE
10ft (3m) LENGTH X 2



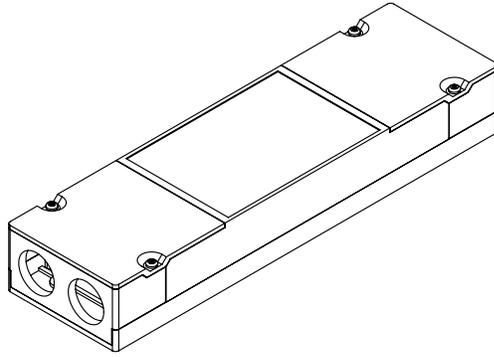
C. POWER SUPPLY

- Converts from line voltage to 54VDC
- Power Supply appearance may vary depending on model ordered



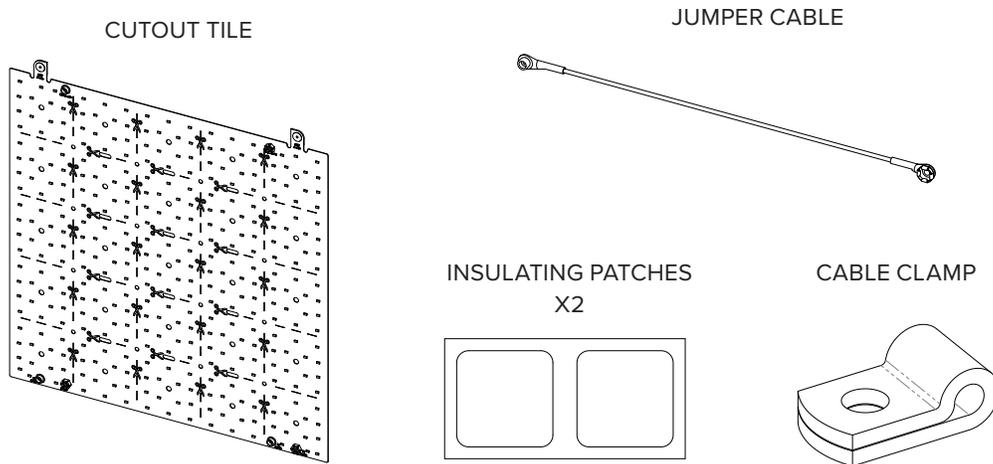
D. CONTROL MODULE (OPTIONAL)

- Uses incoming control signals to dim the TILES. If the Control Module is mounted outdoors its needs to be mounted in a suitable IP65 rated enclosure which is not provided by Cooledge.



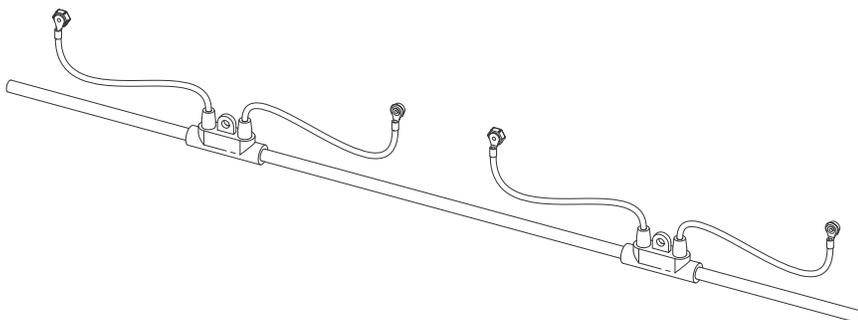
E. CUTOUT KIT (OPTIONAL - DEPENDING ON DESIGN LAYOUT)

- TILE Cutout Exterior CAN NOT BE CUT. Cutting of the TILES will compromise the protective coating.
- Jumper Cables can be used to feed power between a TILE and a TILE Cutout when one or more of the corners of the TILE Cutout have been removed.
- Cable Clamp is used to secure the Jumper Cables



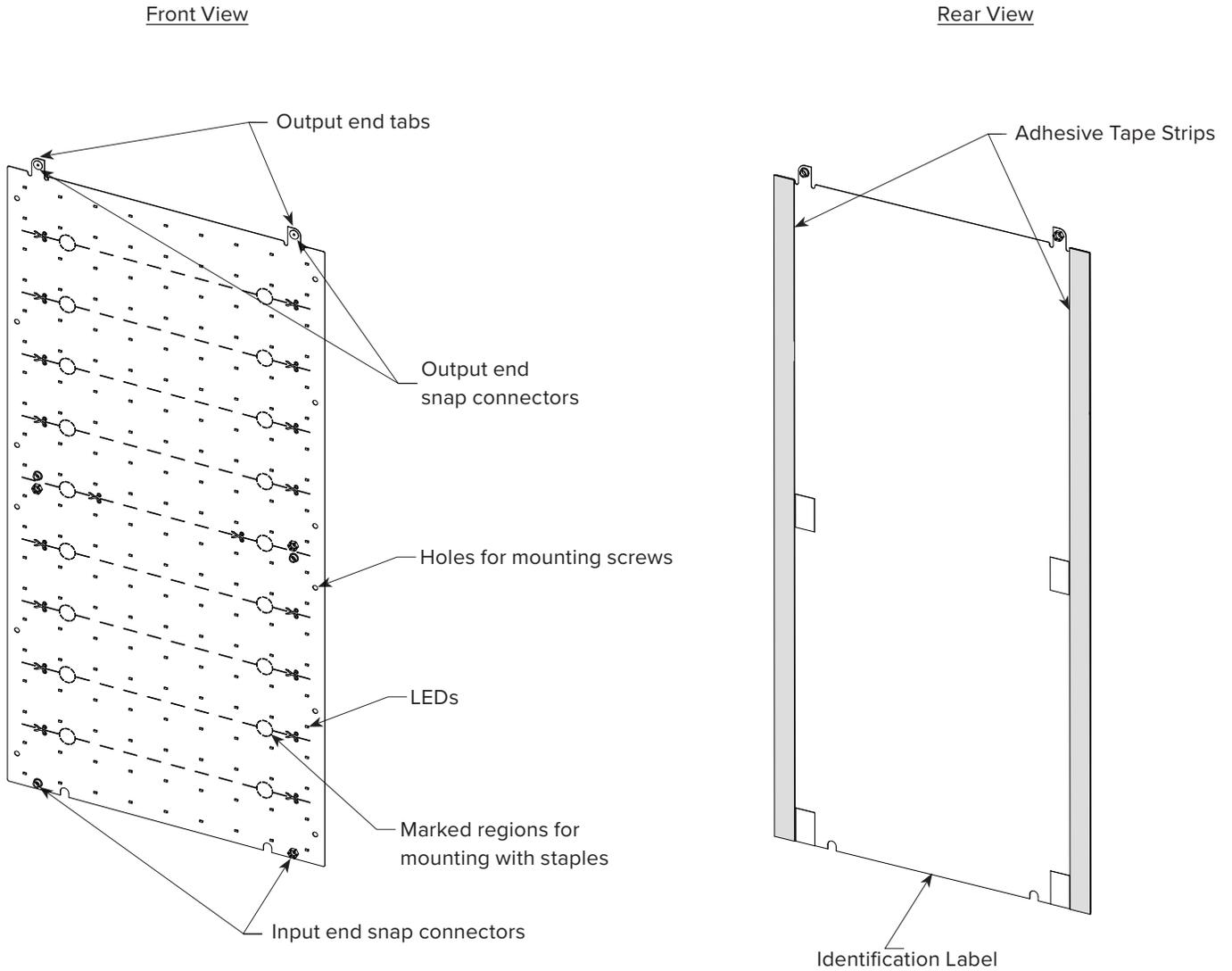
F. T-CABLE

- Makes the power connection between the Starter Cable and the TILES
- Supplied in 4T and 10T configurations
- May be cut shorter if required



3.0 INTRODUCTION TO TILE EXTERIOR

TILE Exterior provides a flexible means of illuminating large areas that required an IP65 rated solution. TILES can be connected in series using snap connectors and can be installed on both flat and curved surfaces. Each cut TILE or Cutout has an identification label corresponding to it's position in the layout in the submittal.



4.0 CARE AND HANDLING GUIDELINES

Always handle TILES along the outer edges of the sheet.

Avoid scrapping off or damaging the IP65 coating on the TILES.

Avoid penetrating the sheet at any location other than along the cut lines or in the marked holes for fasteners.

As with all electronics, light sheets are susceptible to damage from Electrostatic Discharge (ESD). Where possible avoid situations that are conducive to creating static.

Avoid creasing or repeated flexing of TILE as this may cause separation in the traces of the electrical circuits located on the surface of the sheets.

DO NOT CUT TILE Exterior or TILE Cutout Exterior, products are cut and sealed in factory. Cutting of the TILES after sealing will compromise the protective coating.



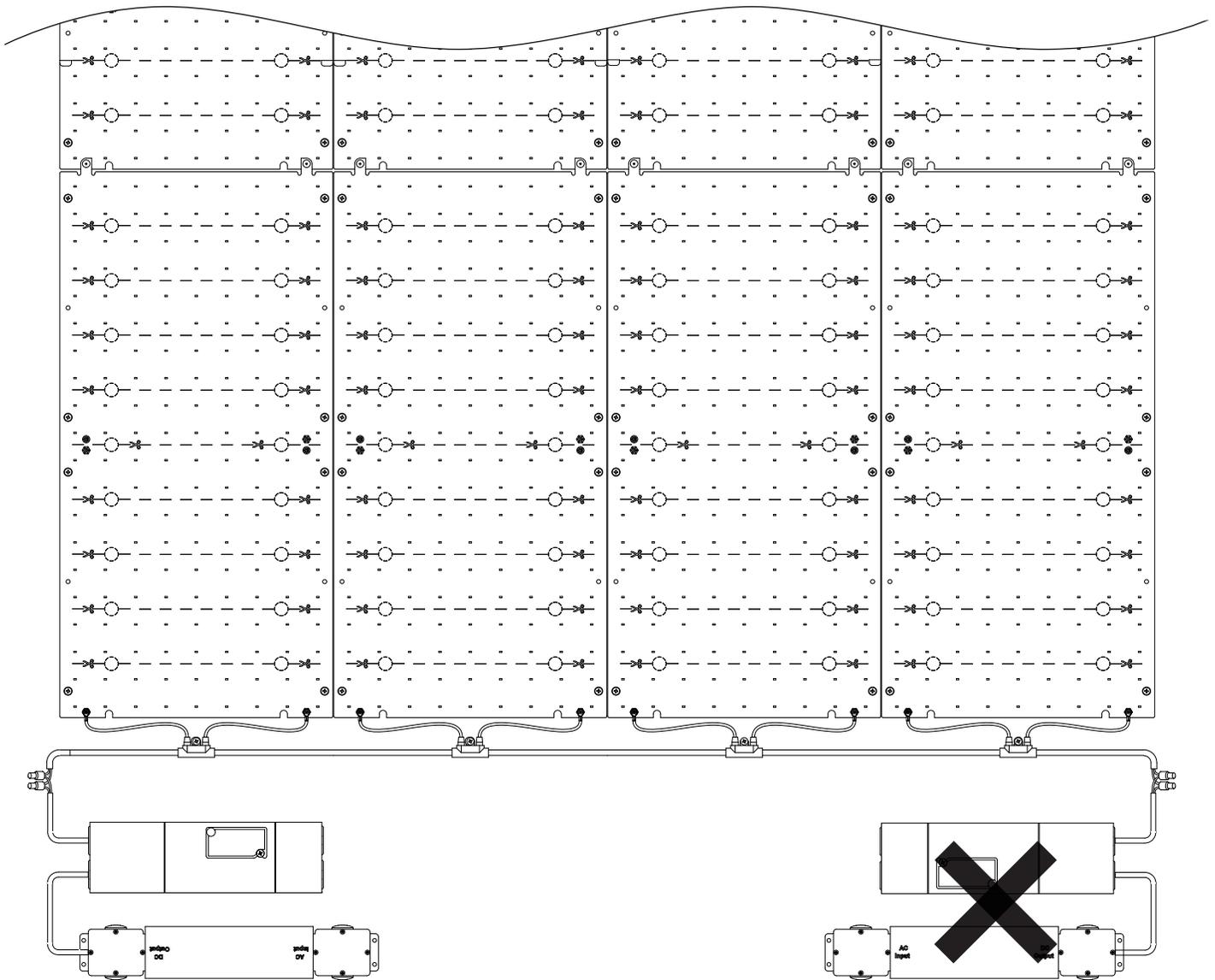
DO NOT CUT



5.0 SYSTEM LAYOUT

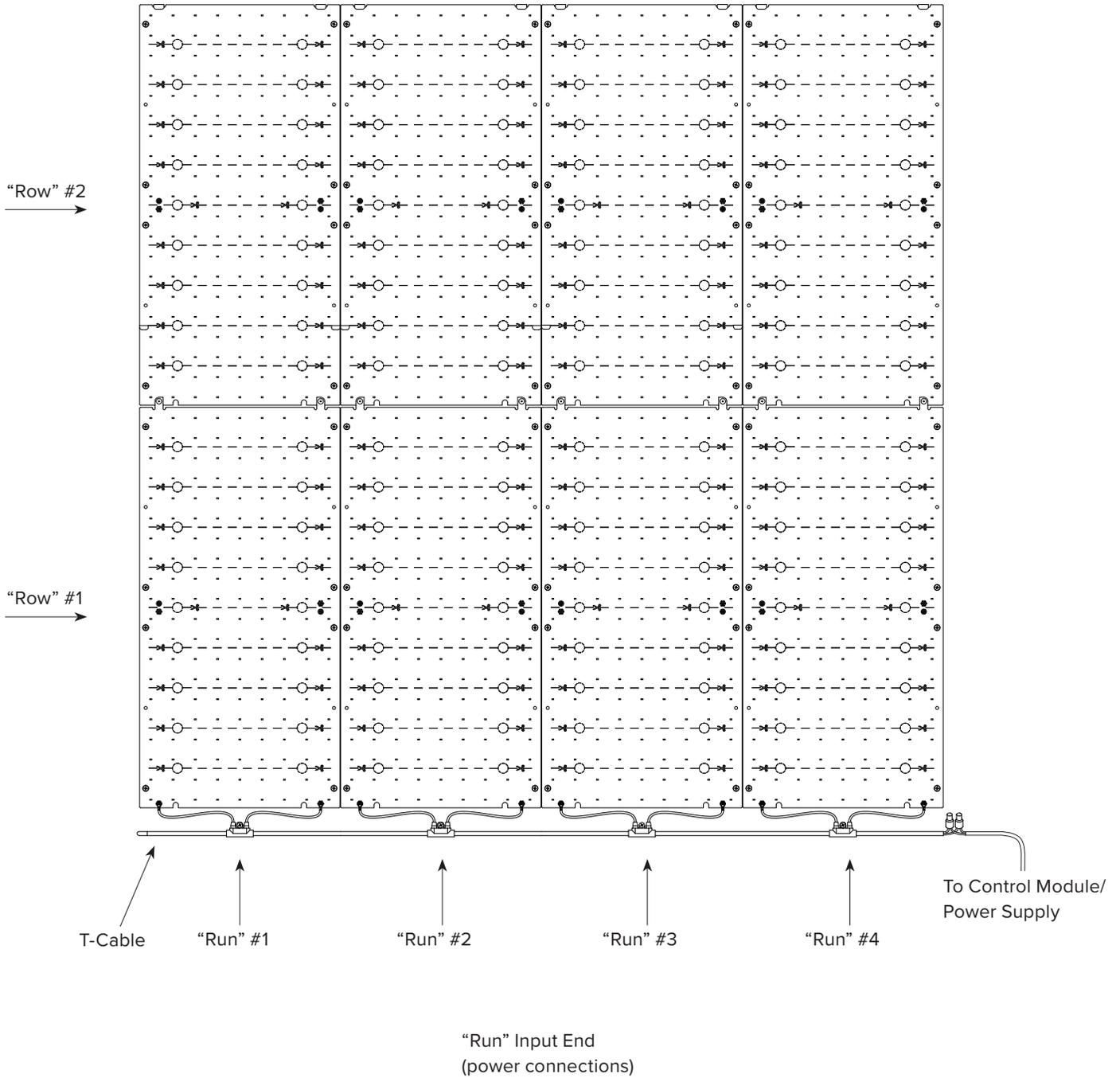
- ⚠ BEFORE STARTING** installation carefully consider your system layout by reading the job specific submittal package:
- Refer to section 8 “TILE Exterior Layout Guidelines” for details regarding the maximum number of TILES per Power Supply. This number is also dependent on the arrangement of the sheets.
 - Each TILE illuminates a 300mm x 600mm (approx 1' x 2') area.
 - TILES are joined electrically by attaching the two (2) sets of snap connectors.
 - Each TILE has an identification label on its back side with an “S###” number, i.e. S24 or S36. This number correlates to the job layout in the submittal package..

- ⚠ DO NOT CONNECT** more than one (1) Power Supply to one (1) light sheet electrical circuit. A light sheet electrical circuit includes any TILES that are in electrical contact with each other on the output side of the Control Module or Power Supply. Circuits must be 90W maximum.



6.0 EXAMPLE INSTALLATION

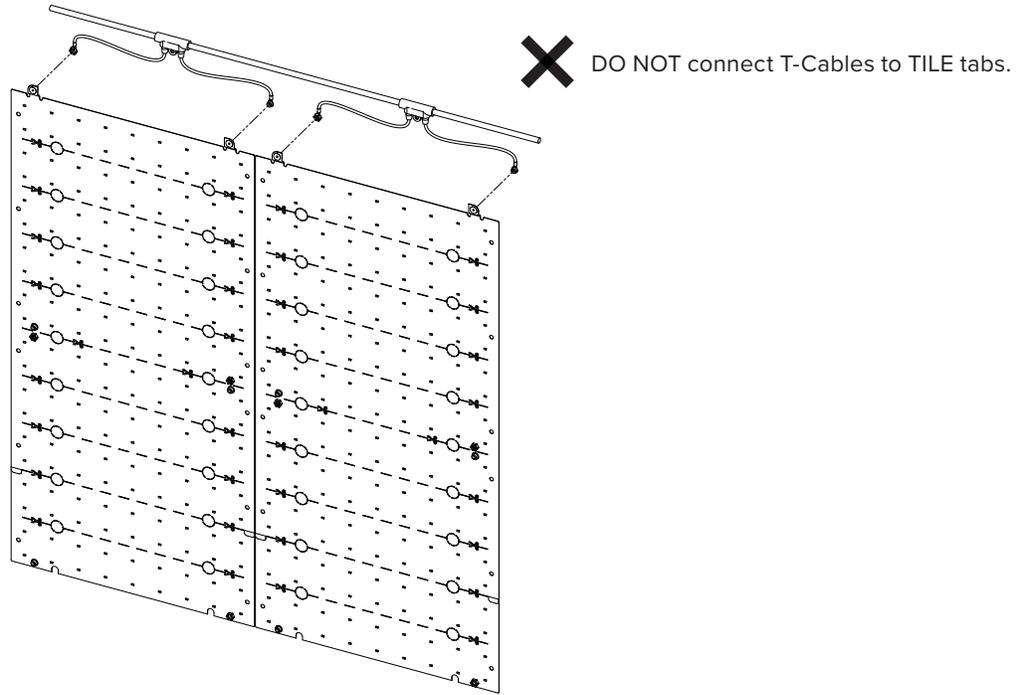
The installation below shows four (4) runs of TILE. Each run consists of two (2) TILE sheets connected in series. The Power Supply or Control Module is connected to the system via the T-Cable and Starter Cable.



NOTE: Any connector tabs on the TILE or Cutout that are not connecting to another TILE or Cutout need to be covered with an insulating tape Patch. Please refer to Section 7.1 step 7 for detailed instructions.

7.0 INSTALLATION

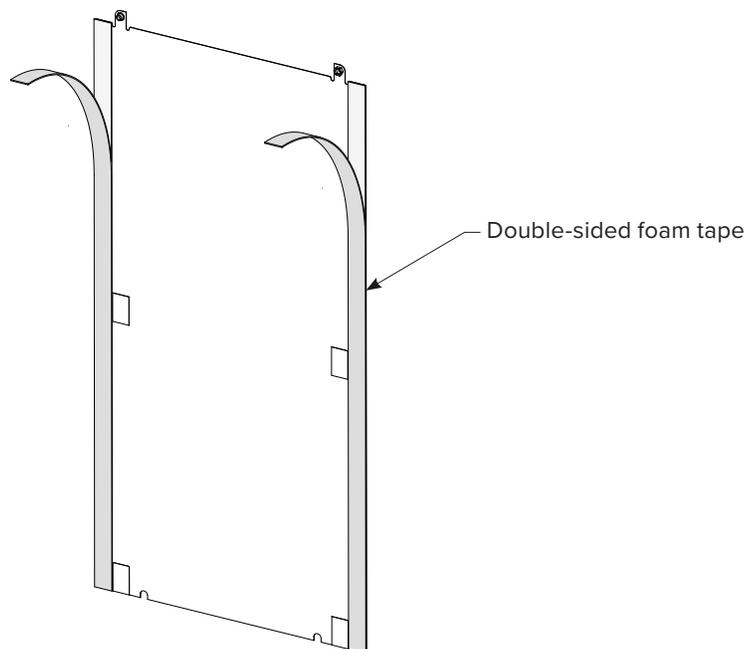
 DO NOT CONNECT the T-Cable at the output (tab) end of the TILE. The T-Cable can only be connected at the input end of the sheet.



7.1 MOUNT THE 1ST RUN OF EXTERIOR TILES

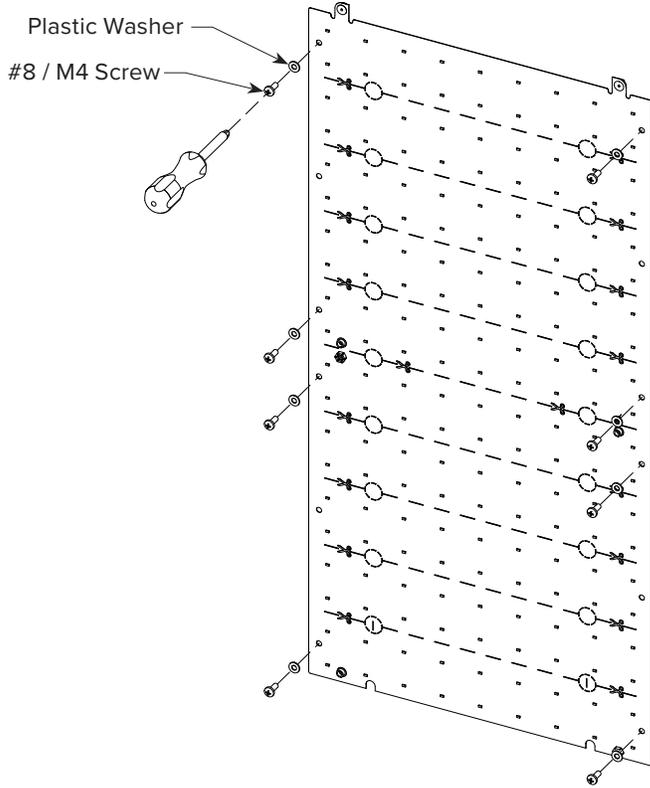
1. Mechanical fasteners are required for the installation of TILES. Either screws or staples may be used in specific locations. For ceiling-mounted applications or where flatness is critical it is recommended to also use the double sided tape which has been applied to the back of the sheets prior to applying the mechanical fasteners.
If using the tape, remove the liner from the tape and carefully place the TILE in position, one side at a time. The tape is pressure sensitive and must be pressed down firmly along its entire length in order to form a strong bond with the mounting surface.

 This step must be performed with great care because it is not possible to reposition the sheet once it has been taped down.



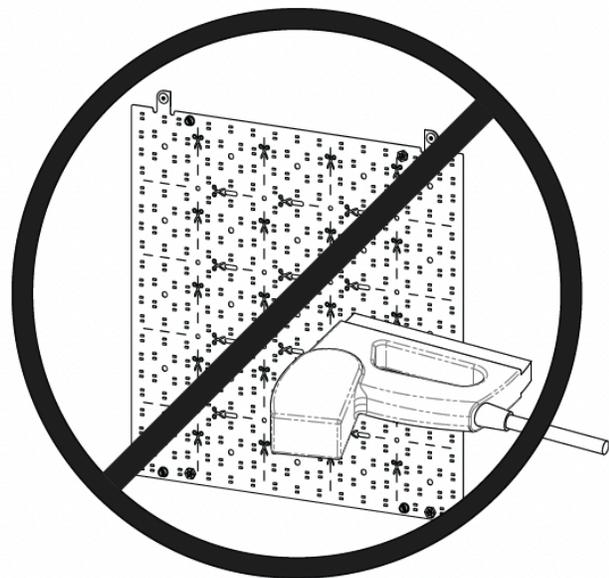
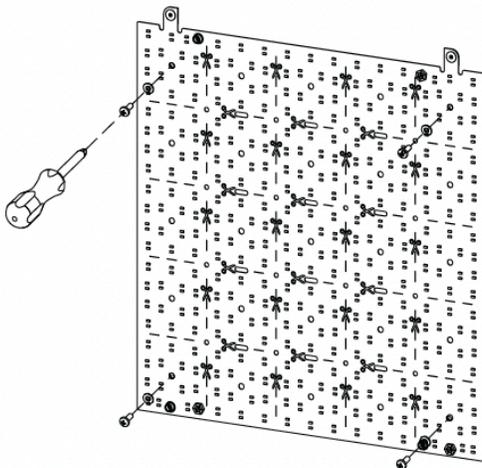
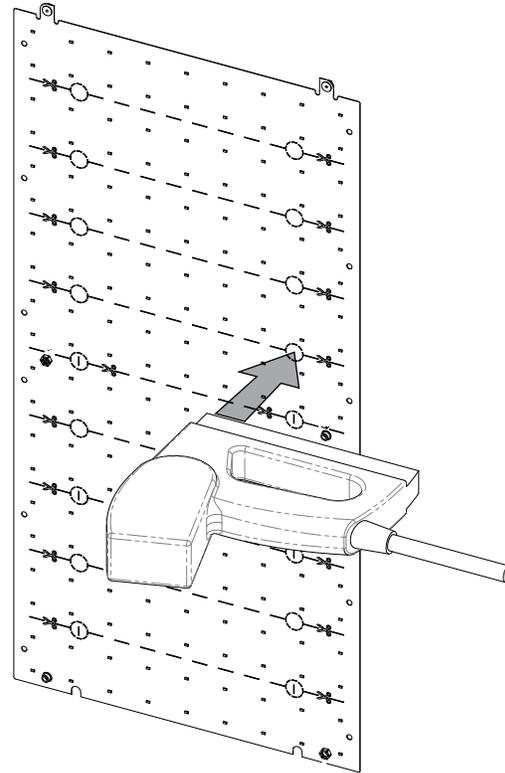
2. Beginning at the input end of a run, position the first TILE where required. Fasten the sheet to the mounting surface using #8 (or M4) fasteners appropriate for the mounting surface. It is recommended to use nylon washers to prevent damage to the TILE.

Mount Using Screws

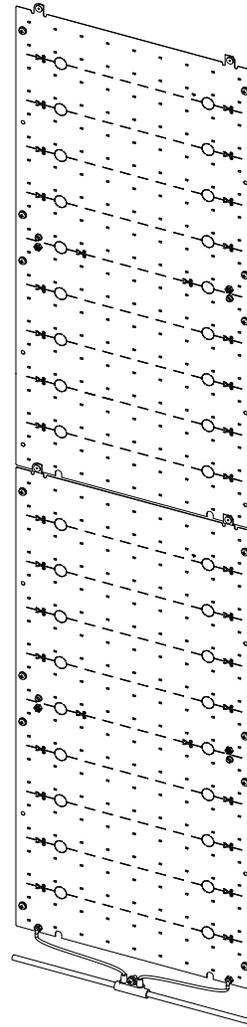


Mount Using Staples

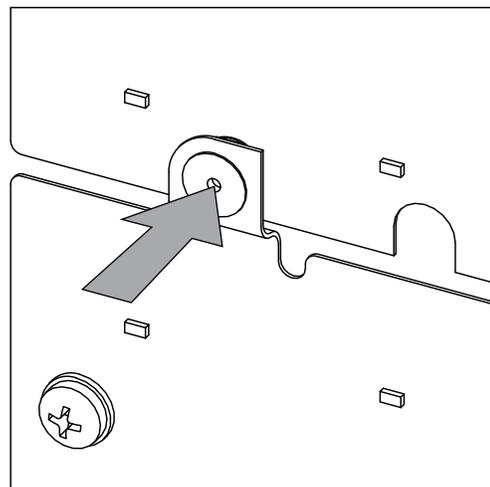
- An electric staple gun is recommended
- Maximum staple width = 1/2" (13mm)



3. Slide the next TILE under the tabs of the first. Ensure that the flexible tabs on the first TILE sit on top of the second.

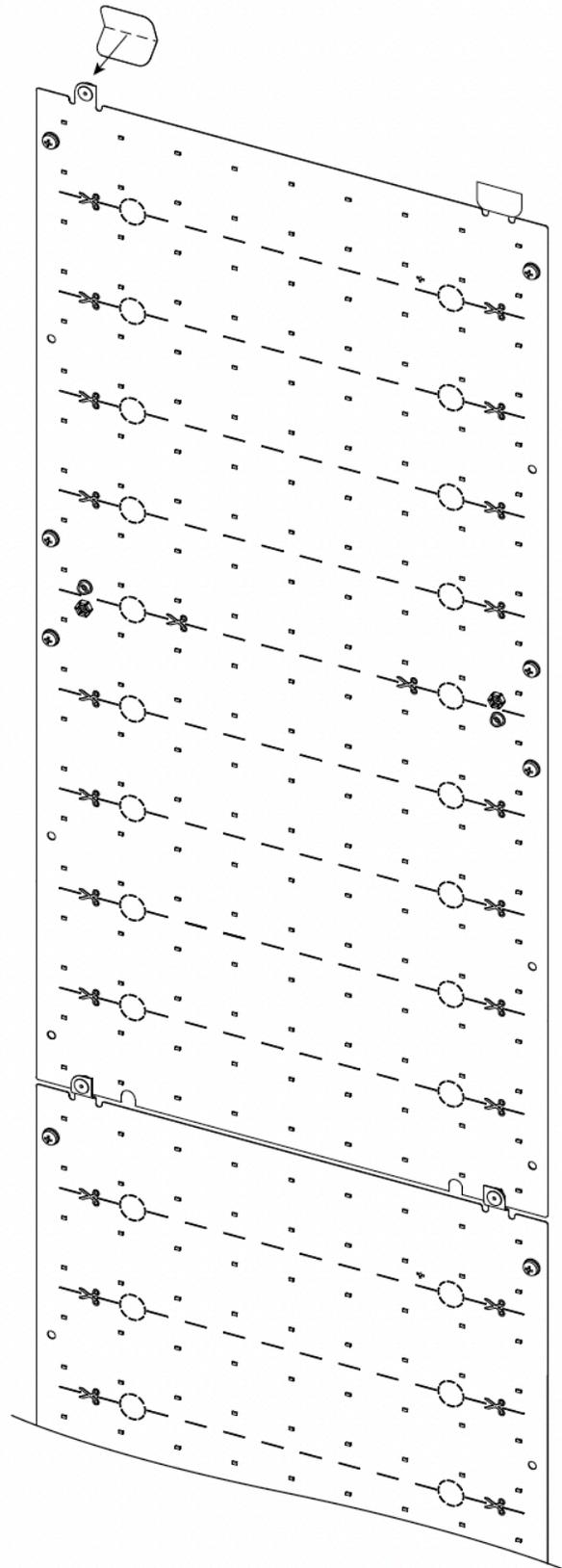


4. Make the electrical connection between the two (2) TILES by gently pressing the snap connectors on the overhanging tabs down until they click together.



 CAUTION: Disconnecting and reconnecting jumpers may damage the connectors on the sheets if repeated more than 3 times. See Section 7.8 for the recommended method.

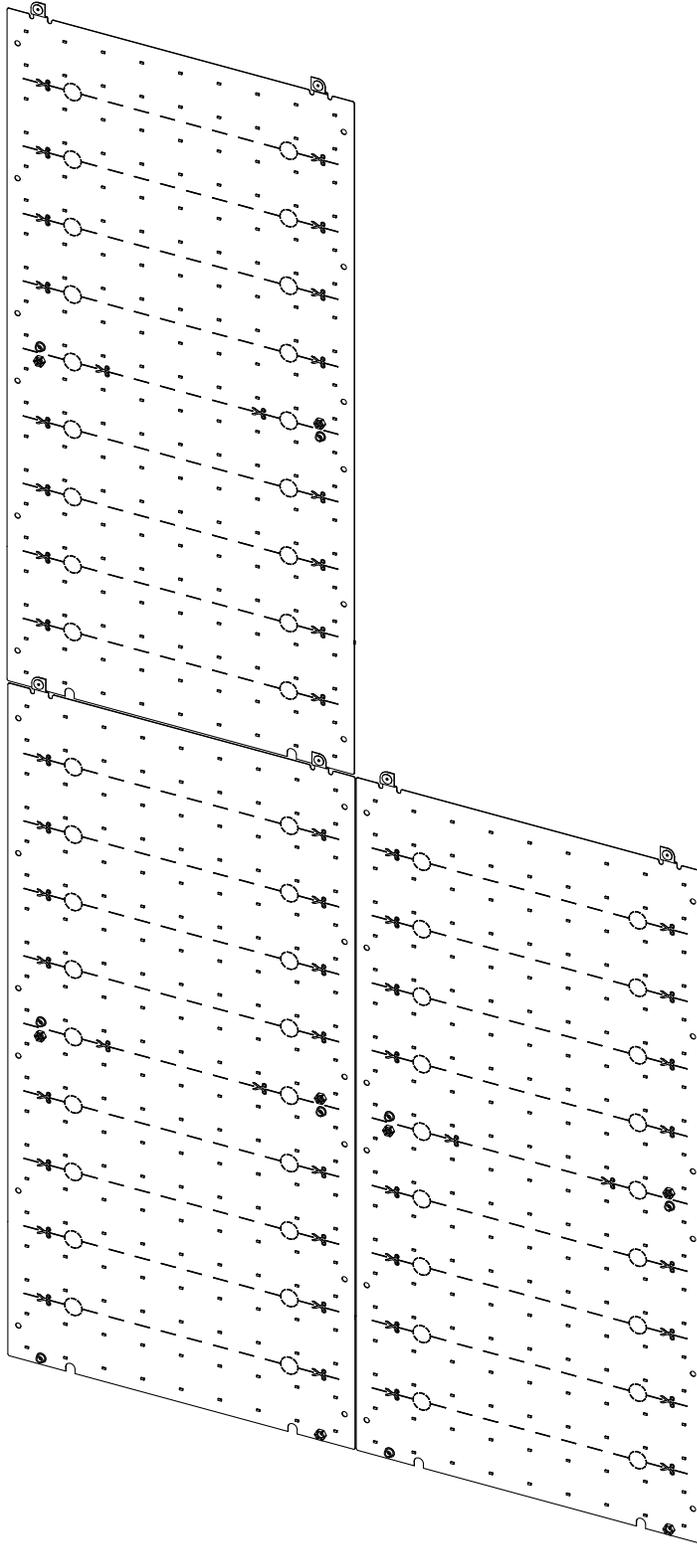
5. Once the second TILE is aligned correctly, attach it in place as in Steps 1 and 2.
6. Repeat steps 3, 4 and 5 until the run is complete. For runs that terminate in a full length TILE, please refer to Steps 7 and 8. For runs where the TILE at the termination end must be cut to fit into the allowable space, please refer to Section 7.3: Cutting TILE.
7. At the termination end of the run, cut the tabs of the top row of the TILE as shown.



7.2 MOUNT ADDITIONAL RUNS OF EXTERIOR TILES

NOTE: The following procedure assumes that runs of TILE are to be mounted on 11.8" (300mm) center-to-center spacing to ensure optimal uniformity of illumination. If the design requires different spacing, other methods of alignment may be required.

Additional runs of TILE should be placed immediately adjacent to the preceding run.



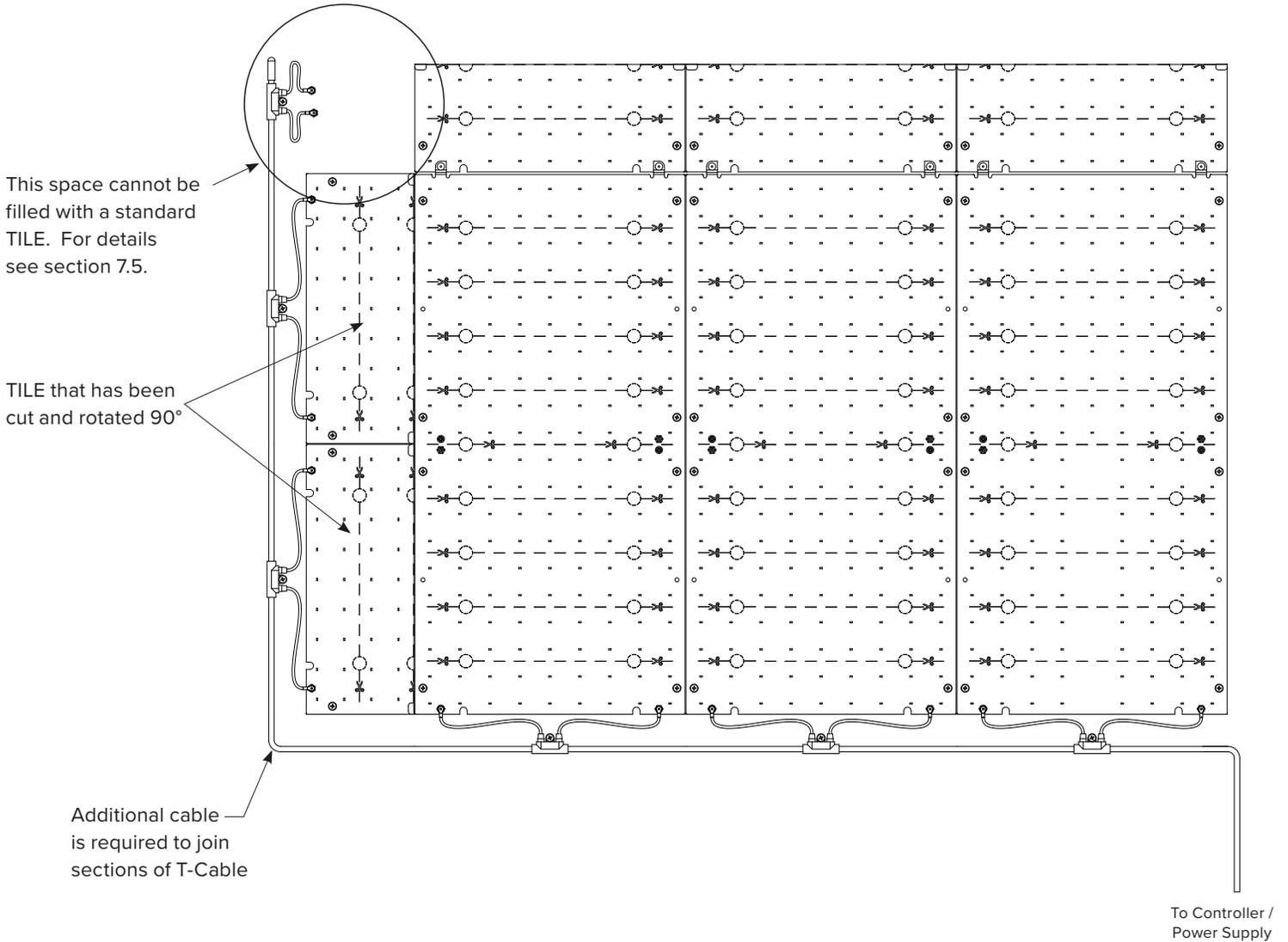
7.3 INSTALLING PRE-CUT EXTERIOR TILES AND CUTOUTS

NOTE: The following procedure assumes that runs of TILE are to be mounted on 11.8" (300mm) center-to-center spacing to ensure optimal uniformity of illumination. If the design requires different spacing, other methods of alignment may be required.

Additional runs of TILE should be placed immediately adjacent to the preceding run.

7.4 INSTALL THE LAST RUN (IF LESS THAN 11.8" [300MM] WIDTH)

Pre-cut TILES could not have been cut in both directions without breaking the electrical circuits that provide power to the LEDs. For this reason, when installing a run that is <11.8" (300mm) in width, it was necessary to cut the sheets to the required width. Now, the installer must rotate the Pre-cut TILES 90° so that the input end faces the outer edge of the run. Pre-cut sheets were cut along the cut lines which corresponded to the required width.

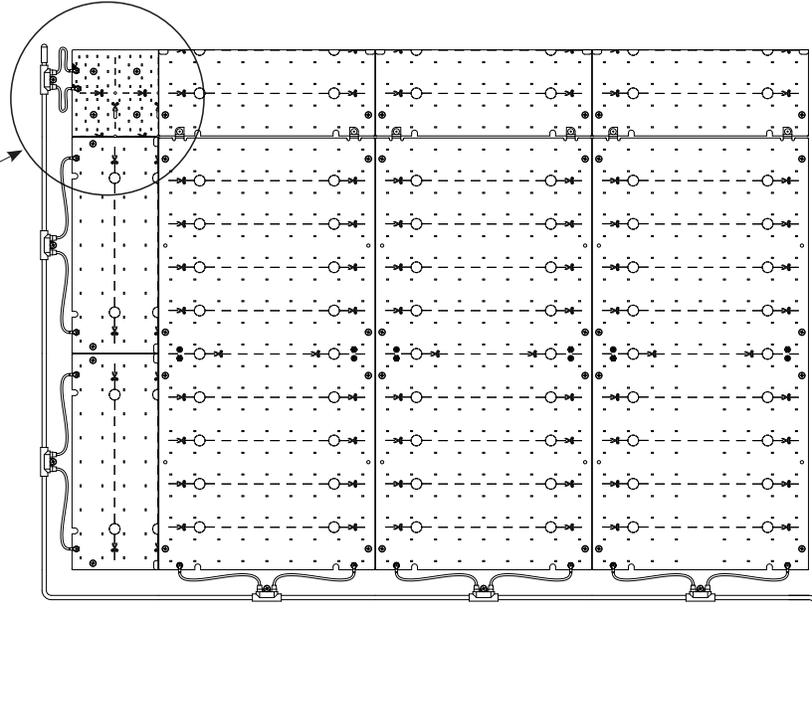


1. Starting at the input end of the previously installed runs, rotate one (1) of the Pre-cut TILE Exterior 90° ensuring that the snap connectors are facing the side on which the T-Cable will be mounted and fasten using appropriate #8 (M4) fasteners as in Section 7.1.
2. Repeat Steps 7.2 and 7.3 until the run has been completed or there is one (1) remaining space that is <11.8" (300mm) in both dimensions.

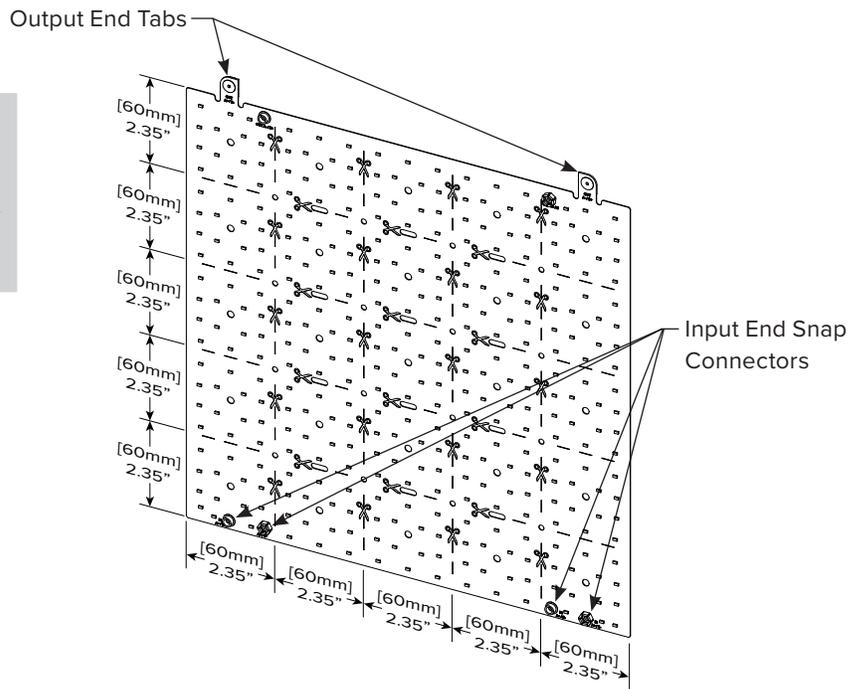
7.5 INSTALL THE LAST CORNER

For design layouts requiring runs that include end TILES that are cut short and where the last run is less than 11.8" (300mm) in width, there will be a space remaining – the “last corner” – that cannot be filled by cutting a standard TILE.

A TILE Cutout is used to fill in this last corner in any square or rectangular layout. This sheet has been designed to be cut in both directions.



1. Peel the adhesive backing from the Cutout and stick it to the mounting surface with the snap connectors facing where the T-Cables will be mounted. Appropriate #8 (M4) fasteners may be added using the holes located in the center of each small square section.

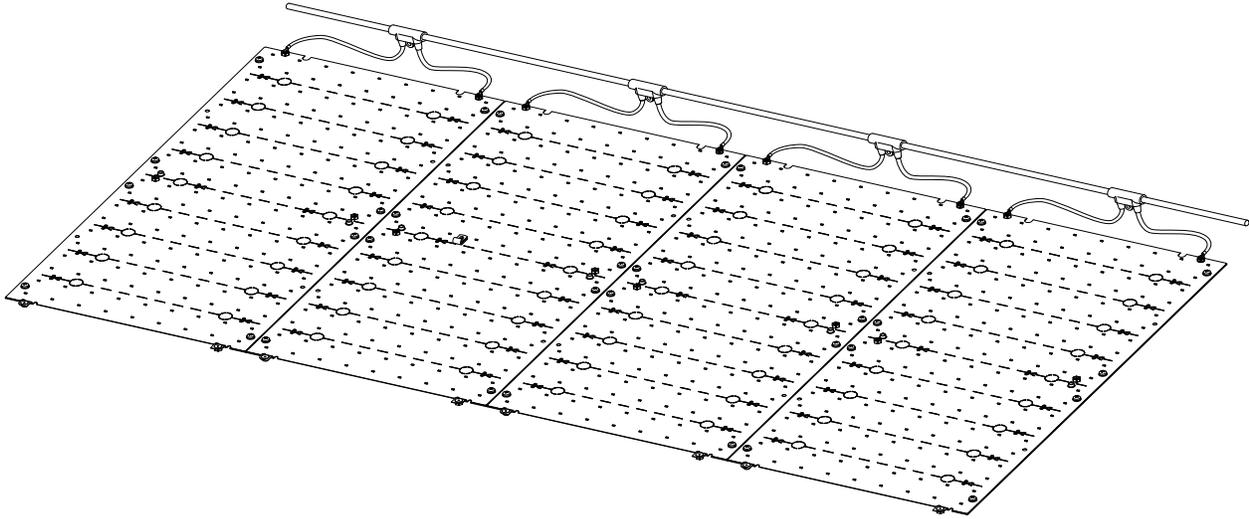


⚠ DO NOT CONNECT the T-Cable at the output (tab) end of the Cutout TILE. The T-Cable can only be connected at the input end of the sheet.

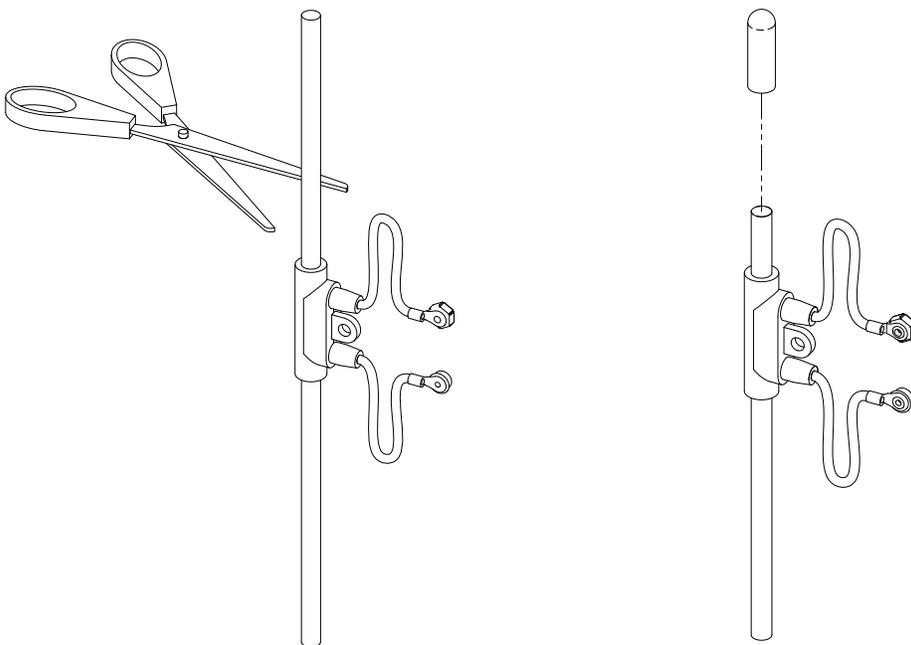
7.6 INSTALL T-CABLES

1. If available, refer to the project shop drawings to locate the input end of the TILE runs. T-Cables are to be mounted adjacent to the input end of the sheets.
2. T-Cables are mounted with M4 (#8) screws. These cables can be installed very close to the TILE and in some cases, it may be required that the input end of the TILES overlaps the cables.

TIP: T-Cables may be mounted either to the TILE mounting surface or to an adjacent surface if preferred as shown.



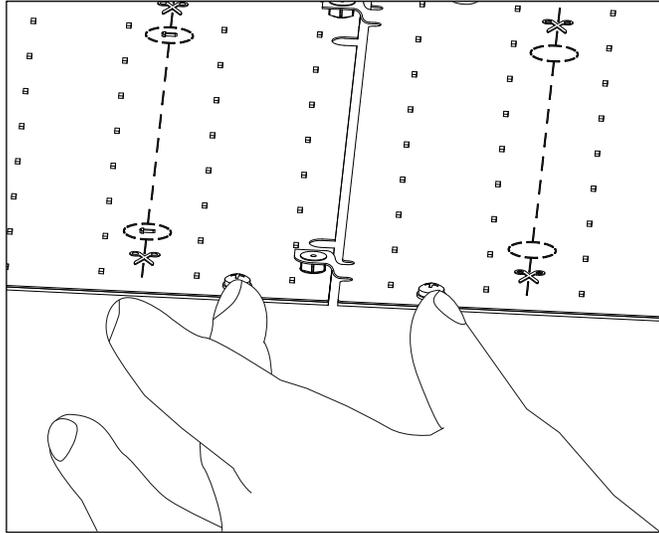
3. T-Cables can be cut to length as required. Cutting can be done anywhere on the cables except at the T-junctions. After cutting, the end of the cable must be insulated using the T-Cable End Cap. Slide the end cap over the cable until the cable is fully inserted.



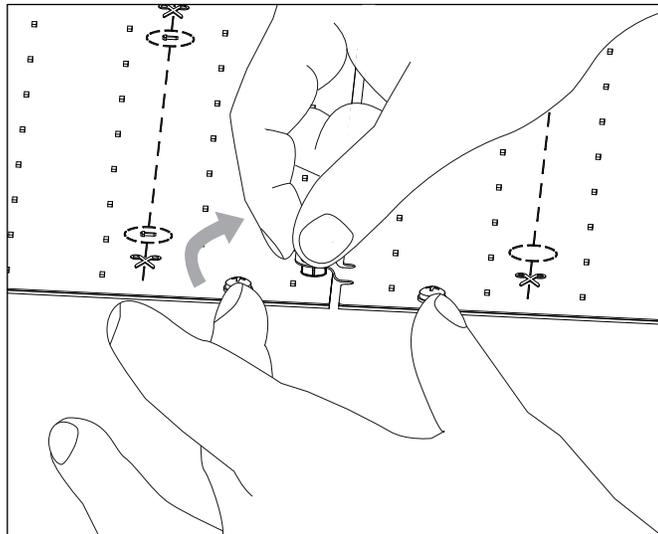
7.7 DISASSEMBLING TILES (IF REQUIRED)

 Caution - the snap connectors are not intended for repeated connections. If it is necessary to separate the sheets after the snap connectors have been mated together, it can be done as follows:

1. Use one hand to restrain the TILE sheets as shown.



2. Grip the tab between the thumb and index finger. Gently separate the sheets while keeping the sheets restrained.



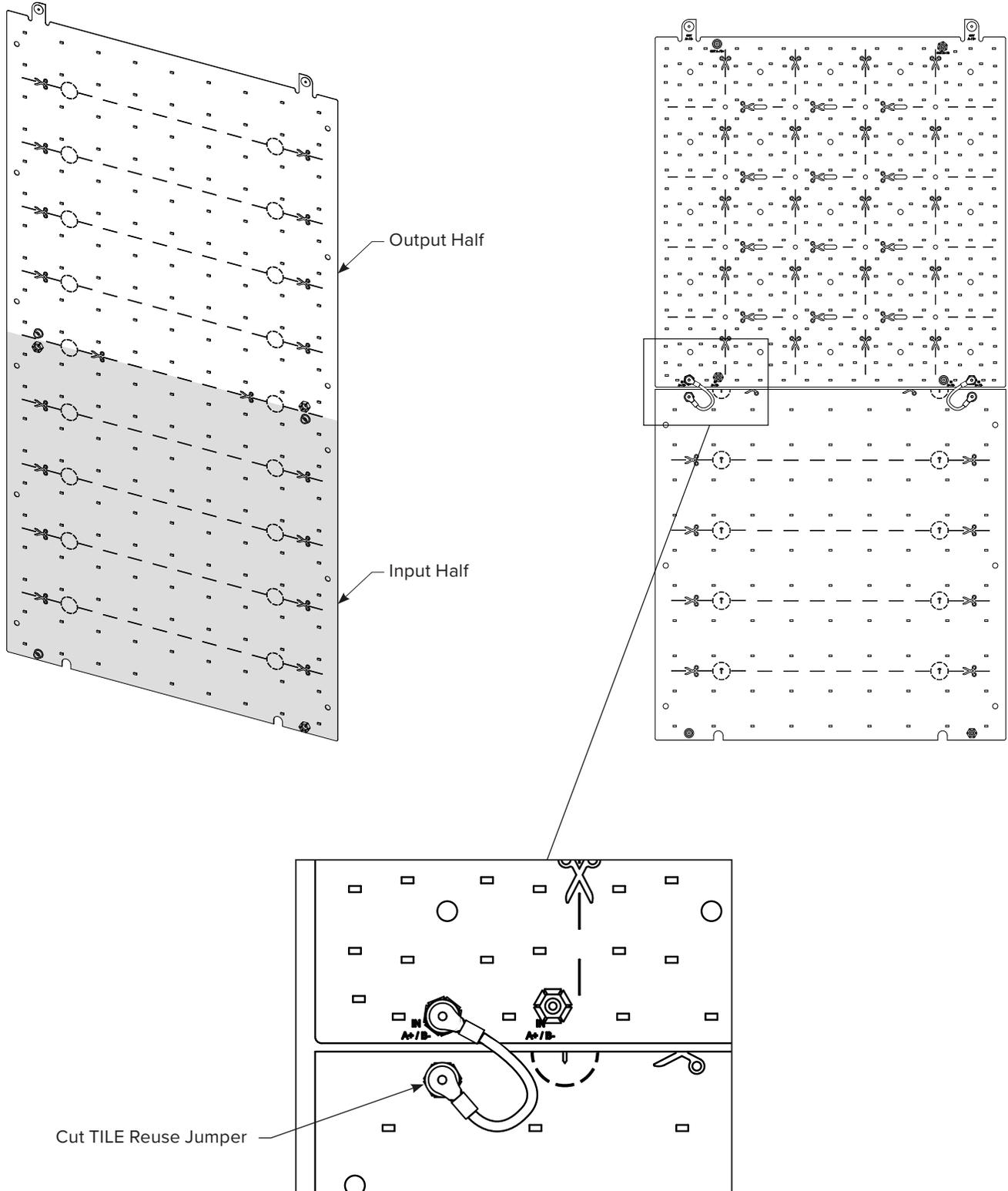
3. Similarly, when disconnecting T-Cables from the TILE Exterior, the sheet should be restrained while gently separating the connectors.

7.8 REUSE OF INPUT END OF TILE (IF REQUIRED)

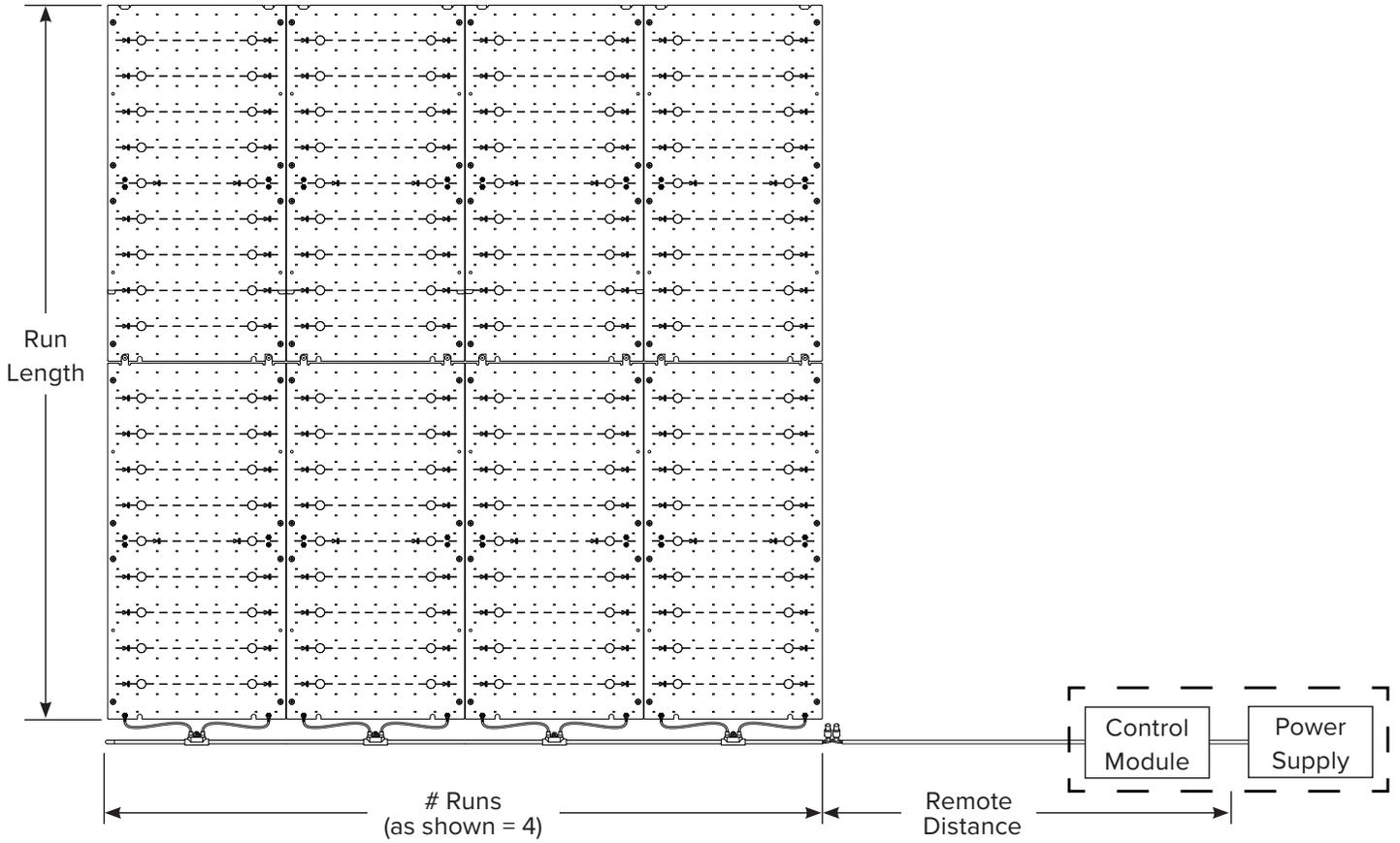
It is possible for a Pre-cut TILE, cut in half, to have both portions reused in the layout.

The output half of the TILE retains the output tabs and can be incorporated into the layout just like a standard TILE.

The input half of the TILE will have snap connectors at its output end, but no tabs. The Cut TILE Reuse Jumper Cable can be used to connect these snap connectors to another light sheet.



8.0 TILE EXTERIOR LAYOUT GUIDELINES



8.1 CALCULATING MAXIMUM RUN LENGTH

TILE EXTERIOR (SINGLE CCT)

Use the following table to determine the maximum run length possible based on the number of runs, the light output of the TILES, and the CCT for one (1) 90W channel. The values shown correspond to the nearest cut increment of the TILE.

TILE EXTERIOR (SINGLE CCT): MAXIMUM RUN LENGTH - VALUES IN FT												
# of Runs	900lm						600lm					
	2200K	2700K	3000K	3500K	4000K	5700K	2200K	2700K	3000K	3500K	4000K	5700K
1	N/A	12.40	13.40	13.80	13.80	13.80	17.30	19.10	19.70	20.10	20.10	20.10
2		6.10	6.00	6.20	6.20	6.20	7.80	8.30	8.90	9.00	9.00	9.00
3		4.10	3.90	4.10	4.10	4.10	5.10	5.50	5.80	6.00	6.00	6.00
4		3.00	3.00	3.00	3.00	3.00	3.90	4.10	4.40	4.40	4.40	4.40
5		2.40	2.30	2.50	2.50	2.50	3.00	3.20	3.50	3.50	3.50	3.50
6		2.00	1.90	1.90	1.90	1.90	2.50	2.70	2.80	3.00	3.00	3.00
7		1.80	1.60	1.80	1.80	1.80	2.10	2.30	2.50	2.50	2.50	2.50
8		1.40	1.40	1.40	1.40	1.40	1.90	1.90	2.10	2.10	2.10	2.10

# of Runs	300lm					
	2200K	2700K	3000K	3500K	4000K	5700K
1	26.60	28.00	28.70	29.50	29.50	29.70
2	17.30	19.10	20.10	20.90	20.90	21.10
3	11.40	12.60	12.00	12.40	12.40	12.60
4	8.70	9.40	9.00	9.40	9.40	9.40
5	6.90	7.50	7.10	7.40	7.40	7.60
6	5.70	6.30	6.00	6.20	6.20	6.20
7	4.90	5.30	5.10	5.30	5.30	5.30
8	4.30	4.70	4.40	4.60	4.60	4.60

Example 1: 2700K; 900 lm/sqft; 4 Runs (as shown in the diagram above)

- Using the table, the corresponding value for this configuration is 3.0ft. Each TILE is ~1.95ft, and can be cut to contain 1-9 strings, each string being 2.36in or ~0.195ft. This example thus uses a maximum of 1 full TILE and a partial TILE with 5 strings.

Example 2: 3000K; 300 lm/sqft; 7 Runs

- Using the table, the corresponding value for this configuration is 5.1ft. Each TILE is ~1.95ft, and can be cut to contain 1-9 strings, each string being 2.36in or ~0.195ft. This example thus uses a maximum of 2 full TILES and a partial TILE with 6 strings.

TILE EXTERIOR (SINGLE CCT): MAXIMUM RUN LENGTH - VALUES IN M												
# of Runs	900lm (9680lm/m ²)						600lm (6450lm/m ²)					
	2200K	2700K	3000K	3500K	4000K	5700K	2200K	2700K	3000K	3500K	4000K	5700K
1	N/A	3.78	4.08	4.20	4.20	4.20	5.28	5.82	6.00	6.12	6.12	6.12
2		1.86	1.84	1.89	1.89	1.89	2.38	2.54	2.70	2.75	2.75	2.75
3		1.26	1.19	1.24	1.24	1.24	1.57	1.67	1.78	1.84	1.84	1.84
4		0.90	0.92	0.92	0.92	0.92	1.19	1.24	1.35	1.35	1.35	1.35
5		0.72	0.70	0.76	0.76	0.76	0.92	0.97	1.08	1.08	1.08	1.08
6		0.60	0.59	0.59	0.59	0.59	0.76	0.81	0.86	0.92	0.92	0.92
7		0.54	0.49	0.54	0.54	0.54	0.65	0.70	0.76	0.76	0.76	0.76
8		0.42	0.43	0.43	0.43	0.43	0.59	0.59	0.65	0.65	0.65	0.65

# of Runs	300lm (3230lm/m ²)					
	2200K	2700K	3000K	3500K	4000K	5700K
1	8.10	8.52	8.76	9.00	9.00	9.06
2	5.28	5.82	6.12	6.36	6.36	6.42
3	3.48	3.84	3.67	3.78	3.78	3.83
4	2.64	2.88	2.75	2.86	2.86	2.86
5	2.10	2.28	2.16	2.27	2.27	2.32
6	1.74	1.92	1.84	1.89	1.89	1.89
7	1.50	1.62	1.57	1.62	1.62	1.62
8	1.32	1.44	1.35	1.40	1.40	1.40

Example 1: 2700K; 9680lm/m²; 4 Runs (as shown in the diagram above)

- Using the table, the corresponding value for this configuration is 0.90m. Each TILE is 0.6m, and can be cut to contain 1-9 strings, each string being 0.06m. This example thus uses a maximum of 1 full TILE and a partial TILE with 5 strings.

Example 2: 3000K; 3230lm/m²; 7 Runs

- Using the table, the corresponding value for this configuration is 1.57m. Each TILE is 0.6m, and can be cut to contain 1-9 strings, each string being 0.06m. This example thus uses a maximum of 2 full TILES and a partial TILE with 6 strings.

TILE EXTERIOR - TUNABLE WHITE

Use the following table to determine the maximum run length possible based on the number of runs, the light output of the TILES, and the CCT for one (1) 90W channel. The values shown correspond to the nearest cut increment of the TILE.

TILE EXTERIOR (TUNABLE WHITE): MAXIMUM RUN LENGTH - VALUES IN FT						
# of Runs	900lm		600lm		300lm	
	DTW	TNW	DTW	TNW	DTW	TNW
1		11.40	14.80	14.00	21.90	20.70
2		5.50	9.00	8.30	20.10	19.30
3		3.70	6.00	5.50	12.40	11.30
4	n/a	2.70	4.40	4.10	9.40	8.50
5		2.10	3.50	3.20	7.40	6.70
6		1.80	3.00	2.70	6.20	5.70
7		1.60	2.50	2.30	5.30	4.80
8		1.20	2.10	1.90	4.60	4.30

Example 1: TNW; 900 lm/sqft; 4 Runs (as shown in the diagram above)

- Using the table, the corresponding value for this configuration is 2.7ft. Each TILE is ~1.95ft, and can be cut to contain 1-9 strings, each string being 2.36in or ~0.195ft. This example thus uses a maximum of 1 full TILE and a partial TILE with 3 strings.

Example 2: DTW; 300 lm/sqft; 7 Runs

- Using the table, the corresponding value for this configuration is 5.3ft. Each TILE is ~1.95ft, and can be cut to contain 1-9 strings, each string being 2.36in or ~0.195ft. This example thus uses a maximum of 2 full TILES and a partial TILE with 7 strings.

TILE EXTERIOR (TUNABLE WHITE): MAXIMUM RUN LENGTH - VALUES IN M						
# of Runs	900lm		600lm		300lm	
	DTW	TNW	DTW	TNW	DTW	TNW
1		3.48	4.50	4.26	6.66	6.30
2		1.67	2.75	2.54	6.12	5.88
3		1.13	1.84	1.67	3.78	3.46
4	n/a	0.81	1.35	1.24	2.86	2.59
5		0.65	1.08	0.97	2.27	2.05
6		0.54	0.92	0.81	1.89	1.73
7		0.49	0.76	0.70	1.62	1.46
8		0.38	0.65	0.59	1.40	1.30

Example 1: 2700K; 9680lm/m²; 4 Runs (as shown in the diagram above)

- Using the table, the corresponding value for this configuration is 0.81m. Each TILE is 0.6m, and can be cut to contain 1-9 strings, each string being 0.06m. This example thus uses a maximum of 1 full TILE and a partial TILE with 3 strings.

Example 2: 3000K; 3230lm/m²; 7 Runs

- Using the table, the corresponding value for this configuration is 1.62m. Each TILE is 0.6m, and can be cut to contain 1-9 strings, each string being 0.06m. This example thus uses a maximum of 2 full TILES and a partial TILE with 7 strings.

8.2 CALCULATING REMOTE POWER & CONTROL DISTANCE

Due to a voltage drop caused by the resistance of the cable carrying power between the Power Supply/Control Module and the TILES, there is a maximum distance from the TILES at which the power and control units may be mounted.

The maximum distance is dependent upon the size of the conductors used and the total load (# of TILES x power per TILE as determined by lumen rating)

Use the tables below to determine the size of the conductors required to achieve the maximum “remote distance” – the distance between the Control Module and TILES if the Control Module is located near the Power Supply OR the total distance between the Power Supply and TILES if the Control Module is located near the TILES.

TILE EXTERIOR (SINGLE CCT) - 300LM (VALUES IN FT)

Conductor Size (AWG)	Configuration (# Runs x Maximum Length per Run)				
	1 x max length (ft)	2 x max length (ft)	3 x max length (ft)	4 x max length (ft)	5 x max length (ft)
16	13	13	38.5	51.5	57
14	20.5	21	61.5	82	91
12	33	33.5	97.5	130.5	144.5
10*	52.5	53.5	155	207.5	230

TILE EXTERIOR (SINGLE CCT) - 600LM (VALUES IN FT)

Conductor Size (AWG)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (ft)	2 x max length (ft)	3 x max length (ft)	4 x max length (ft)
16	14	38.5	58	64
14	23	61.5	92.5	102
12	36.5	98	147.5	162.5
10*	58	156.5	234.5	258.5

TILE EXTERIOR (SINGLE CCT) - 900LM (VALUES IN FT)

Conductor Size (AWG)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (ft)	2 x max length (ft)	3 x max length (ft)	4 x max length (ft)
16	11.5	49.5	63	66
14	18.5	79	100.5	105.5
12	29.5	125.5	160	167.5
10*	47	199.5	254.5	267

*The Control Module accepts wire gauges in the range of 14-16AWG. The 10-12AWG numbers in the chart are based on connecting one short length of 14AWG wire to the Control Module and then splicing on a subsequent length of 10-12AWG wire to supply the TILES.

Example

- Required “remote distance” = 70ft
- TILE Light Output = 600lm/sqft
- # Runs = 3 (assumes maximum run length)

Therefore, conductor size required = **14AWG (or larger)**

TILE EXTERIOR (SINGLE CCT) - 3230 LM/M² (VALUES IN M)

Conductor Size (mm ²)	Configuration (# Runs x Maximum Length per Run)				
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)	5 x max length (m)
1.5	4	4	11.7	15.7	17.4
2.5	6.2	6.4	18.7	25	27.7
4.0	10.1	10.2	29.7	39.8	44
6.0	16	16.3	47.2	63.2	70.1

TILE EXTERIOR (SINGLE CCT) - 6460 LM/M² (VALUES IN M)

Conductor Size (mm ²)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)
1.5	4.3	11.7	17.7	19.5
2.5	7	18.7	28.2	31.1
4.0	11.1	29.9	45	49.5
6.0	17.7	47.7	71.5	78.8

TILE EXTERIOR (SINGLE CCT) - 9680 LM/M² (VALUES IN M)

Conductor Size (mm ²)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)
1.5	3.5	15.1	19.2	20.1
2.5	5.6	24.1	30.6	32.2
4.0	9	38.3	48.8	51.1
6.0	14.3	60.8	77.6	81.4

*The Control Module accepts wire sizes in the range of 1.3mm² to 2.1mm². The 2.5mm² to 6.0mm² numbers in the chart are based on connecting one short length of 1.5mm² wire to the Control Module and then splicing on a subsequent length of 2.5mm² to 6.0mm² wire to supply the TILES.

Example

- Required "remote distance" = 21m
 - TILE Light Output = 6460lm/m²
 - # Runs = 3 (assumes maximum run length)
- Therefore, conductor size required = 2.5mm² (or larger)

TILE EXTERIOR - TUNABLE WHITE

TILE EXTERIOR (TUNABLE WHITE) - 300LM (VALUES IN FT)

Conductor Size (AWG)	Configuration (# Runs x Maximum Length per Run)				
	1 x max length (ft)	2 x max length (ft)	3 x max length (ft)	4 x max length (ft)	5 x max length (ft)
16	13	13	38.5	51.5	57
14	20.5	21	61.5	82	91
12	33	33.5	97.5	130.5	144.5
10*	52.5	53.5	155	207.5	230

TILE EXTERIOR (TUNABLE WHITE) - 600LM (VALUES IN FT)

Conductor Size (AWG)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (ft)	2 x max length (ft)	3 x max length (ft)	4 x max length (ft)
16	14	38.5	58	64
14	23	61.5	92.5	102
12	36.5	98	147.5	162.5
10*	58	156.5	234.5	258.5

TILE EXTERIOR (TUNABLE WHITE) - 900LM (VALUES IN FT)

Conductor Size (AWG)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (ft)	2 x max length (ft)	3 x max length (ft)	4 x max length (ft)
16	11.5	49.5	63	66
14	18.5	79	100.5	105.5
12	29.5	125.5	160	167.5
10*	47	199.5	254.5	267

*The Control Module accepts wire gauges in the range of 14-16AWG. The 10-12AWG numbers in the chart are based on connecting one short length of 14AWG wire to the Control Module and then splicing on a subsequent length of 10-12AWG wire to supply the TILES.

Example

- Required "remote distance" = 70ft
- TILE Light Output = 600lm/sqft
- # Runs = 3 (assumes maximum run length)

Therefore, conductor size required = 14AWG (or larger)

TILE EXTERIOR (TUNABLE WHITE) - 3230 LM/M² (VALUES IN M)

Conductor Size (mm ²)	Configuration (# Runs x Maximum Length per Run)				
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)	5 x max length (m)
1.5	4	4	11.7	15.7	17.4
2.5	6.2	6.4	18.7	25	27.7
4.0	10.1	10.2	29.7	39.8	44
6.0	16	16.3	47.2	63.2	70.1

TILE EXTERIOR (TUNABLE WHITE) - 6460 LM/M² (VALUES IN M)

Conductor Size (mm ²)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)
1.5	4.3	11.7	17.7	19.5
2.5	7	18.7	28.2	31.1
4.0	11.1	29.9	45	49.5
6.0	17.7	47.7	71.5	78.8

TILE EXTERIOR (TUNABLE WHITE) - 9680 LM/M² (VALUES IN M)

Conductor Size (mm ²)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)
1.5	3.5	15.1	19.2	20.1
2.5	5.6	24.1	30.6	32.2
4.0	9	38.3	48.8	51.1
6.0	14.3	60.8	77.6	81.4

*The Control Module accepts wire sizes in the range of 1.3mm² to 2.1mm². The 2.5mm² to 6.0mm² numbers in the chart are based on connecting one short length of 1.5mm² wire to the Control Module and then splicing on a subsequent length of 2.5mm² to 6.0mm² wire to supply the TILES.

Example

- Required “remote distance” = 21m
- TILE Light Output = 6460lm/m²
- # Runs = 3 (assumes maximum run length)

Therefore, conductor size required = 2.5mm² (or larger)

COOLEEDGE CABLES

- Cooledge supplies Starter Cables 16AWG (1.3mm²) of length 10ft (3m). These cables can also be purchased individually.
- 14AWG (1.5mm²) Extension Cables in 10'(3m) and 20'(6m) lengths are also available.
- Other cable sizes (if required) are supplied by installer.

9.0 TROUBLESHOOTING

If the TILE Exterior does not illuminate when power is applied:

- Check to ensure all electrical connections have been made.

If a single LED or one (1) section of LEDs on a TILE does not illuminate:

- The circuit for those LEDs has likely been damaged and the TILE Exterior should be replaced.

10.0 PRODUCT SUPPORT

Contact Cooledge Technical Support at:

E: apps.engineering@cooledgelighting.com

O: +1.781.899.0317

T: 1.844.455.4448 (toll free – North America)

11.0 WARRANTY

Cooledge warrants that the products manufactured, distributed or sold by it will:

- | | |
|----|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Be free of any claim of ownership by third parties. |
| 2. | Be conforming to the Specifications and free from defects in materials and workmanship under normal use, handling, warehousing and service. |

The warranty period specified in the Cooledge Warranty Terms and Conditions for the products will be for a period of five (5) years from the shipment date of any products sold by Cooledge.



RoHS



5 Year Limited Warranty:
Parts and workmanship