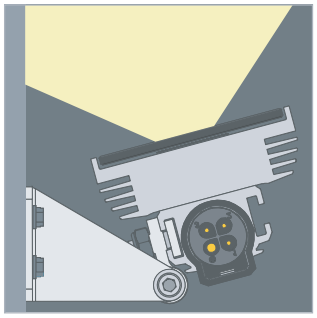
STR9®-INF INFINITY® GVA TECHNOLOGY

Installation Guide

GVA Lighting, Inc. 2771 Bristol Cir, Oakville, Ontario, L6H 6X5, Canada
+1 905 569 6044 | support@gvalighting.com

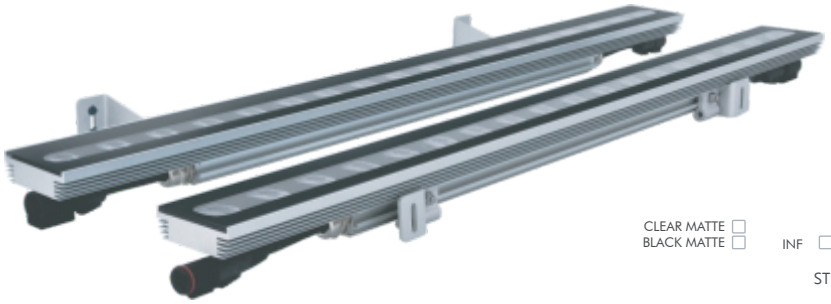
OVERVIEW

The STR9® is a long run, high power, linear surface mount LED lighting system designed for exterior architectural lighting applications. This guide contains important information on planning and installing your new STR9 LED fixture. For your protection, read it carefully and save it for future reference.



SUPPLIED PARTS

Fixtures



CLEAR MATTE ☐
BLACK MATTE ☐

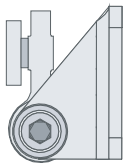
600 ☐
900 ☐
1200 ☐
1500 ☐
INF ☐ CUSTOM ☐

STR9-MONO ☐

Brackets

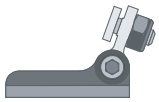
☐

W40 ☐
W80 ☐
W130 ☐
W155 ☐
W180 ☐



Adjustable W Bracket

☐ SM ☐



Surface Mount Adjustable

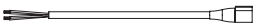
☐ CLP ☐

Clip Bracket

Other

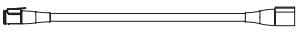
End of Line Cap ☐

RELATED PARTS



9.1 M (30 FT) ☐
15.2 M (50 FT) ☐
CUSTOM ☐

Leader Cable ☐



0.9 M (3 FT) ☐
1.8 M (6 FT) ☐
3.6 M (12 FT) ☐
CUSTOM ☐

Jumper Cable ☐

PS-INF-2000 ☐
PDB-INF-2000 ☐

Power Supply / Power Data Box ☐

⚠ WARNING

Do not attempt to install or use Luminaire until you read and understand this installation guide and safety labels.

Luminaires must be installed by a qualified professional in accordance with all national and local electrical and construction codes and regulations.

Ensure that main power supply is OFF before installing or wiring Luminaire(s).

Do not exceed the specified voltage and current input.

Do not use a luminaire with a damaged lens, body or cable.

Not heading warnings may result in a hazardous situation which can cause property damage, injury or death.

CAUTION ⚠

Do not exceed the specified voltage and current input.

Do not exceed the maximum number of specified fixtures in a light run. Doing so will result in a current overload.

GVA Luminaires have no serviceable parts. Do not attempt to open the units.

Do not hot swap! Ensure power supply is off before connecting or disconnecting fixtures.

Do not stare into beam or view directly with optical instruments.

Unauthorized field repairs will void warranty.

Specifications subject to change without notice. Every effort has been made to ensure that the information in this manual is accurate. GVA Lighting, Inc. is not responsible for printing or clerical errors.
Refer to www.gvalighting.com for additional information.

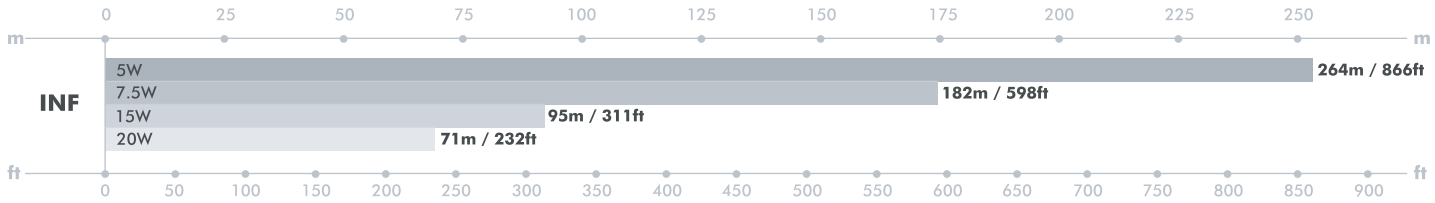
© GVA Lighting Inc. All rights reserved.

Installation Guide

GVA Lighting, Inc. 2771 Bristol Cir, Oakville, Ontario, L6H 6X5, Canada
+1 905 569 6044 | support@gvalighting.com

Maximum Allowable Run Length

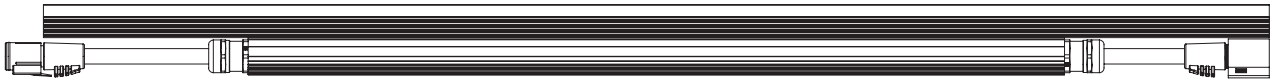
For fixtures connected end to end, the maximum possible run lengths follow:



IMPORTANT - this table is included as an estimate only, the addition of leader and jumper cables to the circuit will impact the total run length, please consult the factory for custom run calculations.

Fixture Installation

There are several things to note before beginning the installation of your new STR9® luminaires.



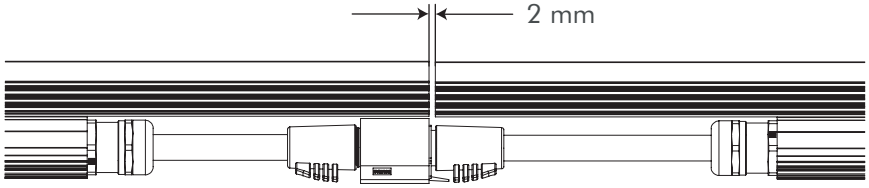
INPUT END
(portruding connector)

OUTPUT END
(flush connector)

Power and data enters the fixture from the input side (portruding connector) and exits from the output side of the fixture (flush connector). A dust cap must be installed on the last fixture of a run to prevent contact corrosion and the risk of shock.

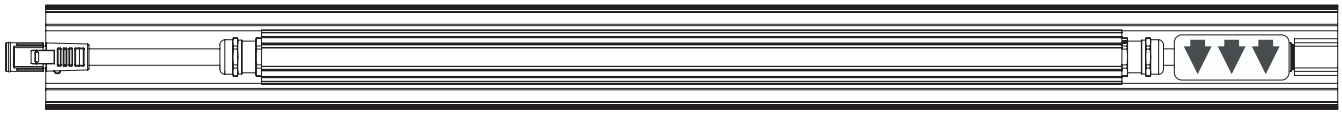
The connectors mate with a sensitive and audible "click" when securely connected. When fixtures are connected end to end, a 2 mm gap must be maintained between fixture ends to allow for the thermal expansion of the aluminum bodies.

Caution: When installing STR9 fixtures end to end, leave a minimum 2 mm gap between fixtures to allow for thermal expansion.



STR9 Luminaires are shipped with a protective blue film on the glass surface. The blue film must be removed before finishing the installation. It is recommended that you wait until the fixture is fully mounted before removing the film to prevent scratches to the glass during installation.

For luminaires with asymmetric optics, a fixture aim label is included on the bottom of the fixture. The arrows point at the direction of the surface to be illuminated.



SIDE OF SURFACE TO BE ILLUMINATED

Specifications subject to change without notice. Every effort has been made to ensure that the information in this manual is accurate. GVA Lighting, Inc. is not responsible for printing or clerical errors.
Refer to www.gvalighting.com for additional information.

© GVA Lighting Inc. All rights reserved.

GVA Lighting, Inc. 2771 Bristol Cir, Oakville, Ontario, L6H 6X5, Canada
+1 905 569 6044 | support@gvalighting.com

Adjustable Bracket Installation

1. **Follow** the recommended bracket spacing for end to end STR9® bracket installation. When using fasteners for which pre-drilled holes are required, use the table and diagram below for correct pilot hole placement.

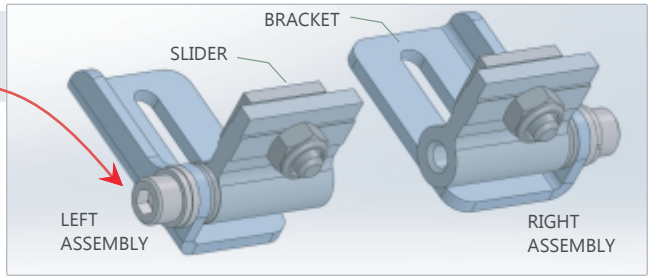
CAUTION: Leave a 2mm gap between fixtures

Fixture Length (L)*	Dimension D1		Dimension D2	
Nominal	mm	inch	mm	inch
600mm	200	8"	400	15 5/8"
900mm	500	20"	400	15 1/2"
1200mm	800	32"	400	15 1/4"
1500mm	1100	44"	400	15"

*includes 2mm gap between fixtures

2. **Ensure** that you have a pair of symmetric brackets, the bracket assembly consists of seven components pre-assembled as follows in left left and right assembly pairs:

WARNING: Bracket assembly bots must be torqued to 20 Nm or 14.75 ft lbs.



WARNING: Use mounting hardware suitable for the mounting surface. Use of inappropriate hardware may result in the dismounting of the bracket and can result in equipment damage, injuries, or death.

3. **Install** brackets on mounting surface with dimensions D1 according to step 1. Use a square to ensure brackets are perpendicular to the illumination surface and that the fixture is mounted at the desired distance (FD) away. This distance must be greater than 50 mm from the illumination plane and may need to be even more than that to ensure tool clearance (see step 6). Select an appropriate M5 or #10 fastener and washer to securely mount the bracket to the surface (not supplied). In cases subject to vibration, high winds, or for vertical mounting two screws per bracket are required.

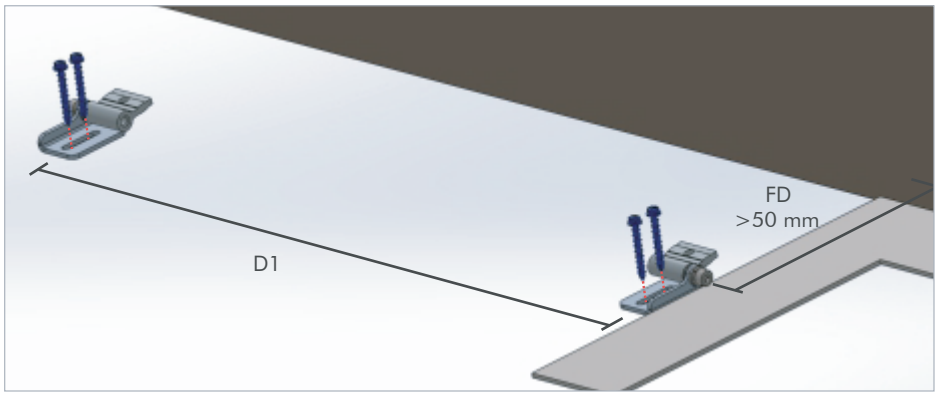
Hardware Required per Bracket (not supplied)

x2

M5 or #10 screw

x2

M5 or #10 washer (depending on fastener)



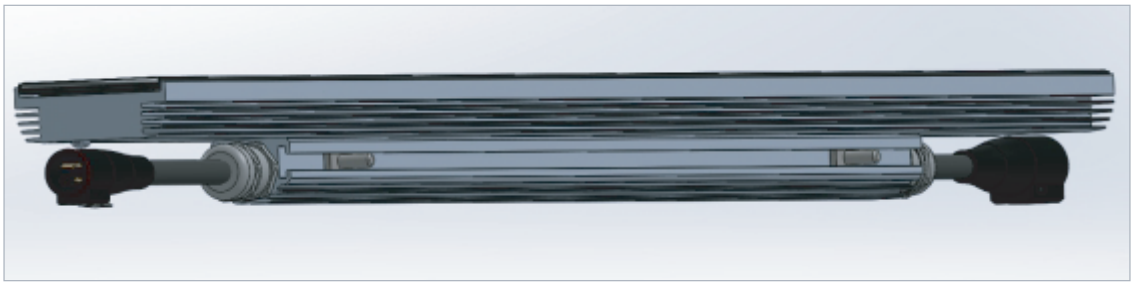
Specifications subject to change without notice. Every effort has been made to ensure that the information in this manual is accurate. GVA Lighting, Inc. is not responsible for printing or clerical errors.
Refer to www.gvalighting.com for additional information.

© GVA Lighting Inc. All rights reserved.

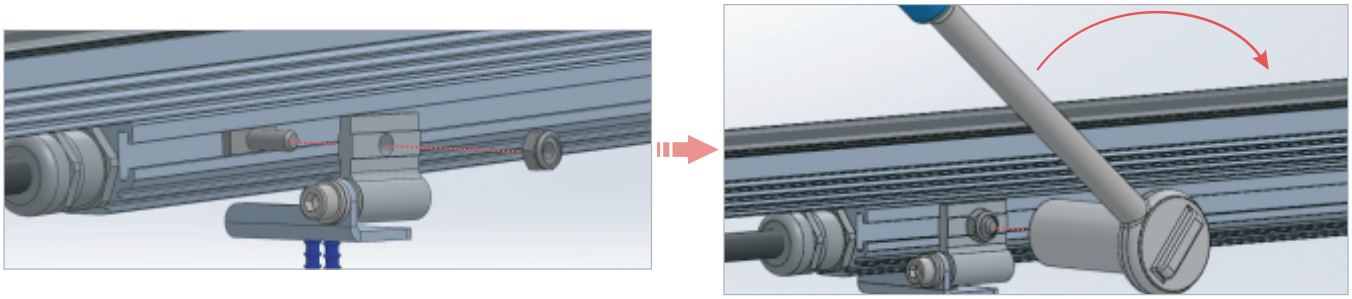
GVA Lighting, Inc. 2771 Bristol Cir, Oakville, Ontario, L6H 6X5, Canada
+1 905 569 6044 | support@gvalighting.com

Adjustable Bracket Installation continued

4. **Insert** both sliders into the mounting slot on the fixture.

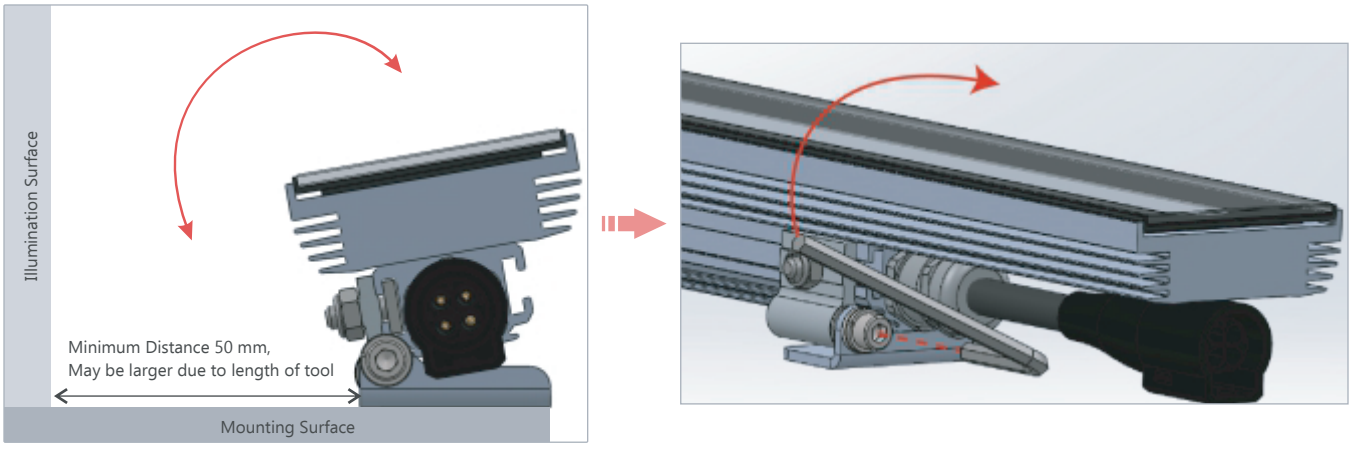


5. **Attach** the fixture to the installed brackets with the nylon lock nut using an M10 socket (not supplied) to tighten the nut so that the slider is locked firmly in place.



WARNING: Do not power luminaires until fully installed.

6. **Adjust** the fixture to the desired angle then use an M5 allen key or hex tool to tighten both the bracket screws until the angle is locked and rotation is firmly prevented. If there is not enough room between the fixture and the illumination surface for tool clearance use a W40 bracket with the slider oriented on the other side of the fixture (see step 6a).



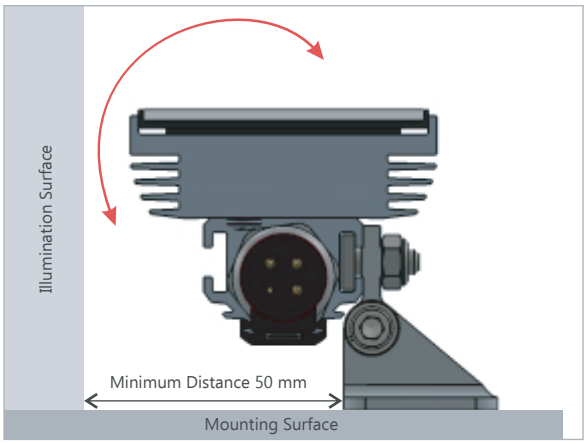
Specifications subject to change without notice. Every effort has been made to ensure that the information in this manual is accurate. GVA Lighting, Inc. is not responsible for printing or clerical errors.
Refer to www.gvalighting.com for additional information.

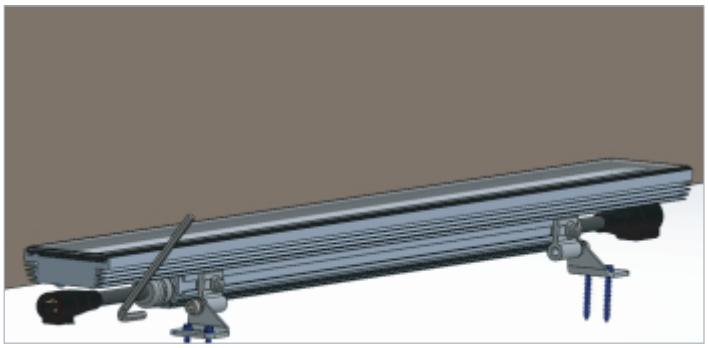
© GVA Lighting Inc. All rights reserved.

GVA Lighting, Inc. 2771 Bristol Cir, Oakville, Ontario, L6H 6X5, Canada
+1 905 569 6044 | support@gvalighting.com

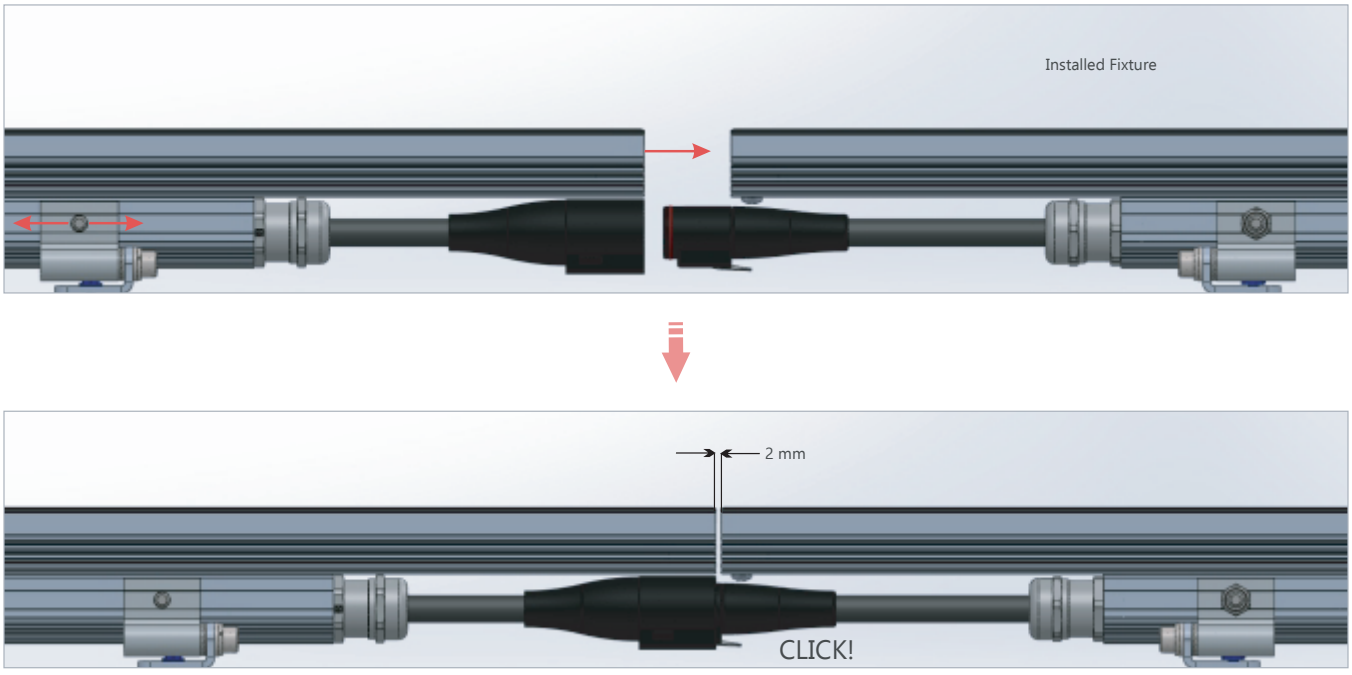
Adjustable Bracket Installation continued

6a. **Use** W40 brackets to mount the fixture as close as possible to the illumination surface. Follow steps 1 - 6, however orient the sliders and brackets away from the wall.





7. **Install** the next set of brackets along the run following steps 1 - 6. The sliders allow some linear adjustability enabling the maintenance of the 2 mm gap between fixtures, ensuring the maintenance of pitch and allowing enough room for thermal expansion. The connection between fixtures results in a sensitive and audible "click" when properly mated.



Specifications subject to change without notice. Every effort has been made to ensure that the information in this manual is accurate. GVA Lighting, Inc. is not responsible for printing or clerical errors.
Refer to www.gvalighting.com for additional information.

© GVA Lighting Inc. All rights reserved.

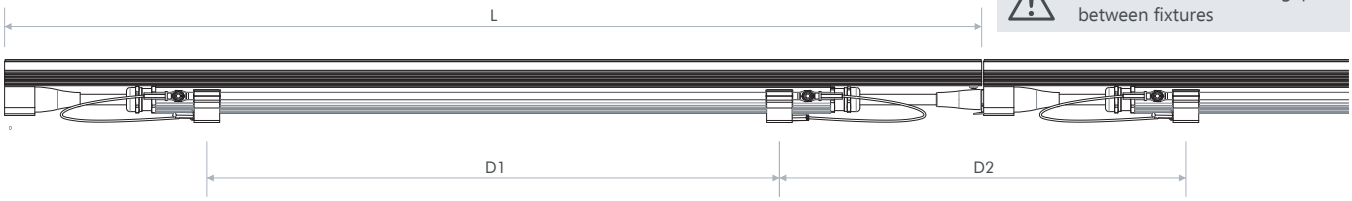
Installation Guide

GVA Lighting, Inc. 2771 Bristol Cir, Oakville, Ontario, L6H 6X5, Canada
+1 905 569 6044 | support@gvalighting.com

Clip Bracket Installation

1. **Follow** the recommended bracket spacing for end to end STR9® bracket installation. When using fasteners in which the holes need to be pre-drilled, use the table and diagram below as a recommended guide.

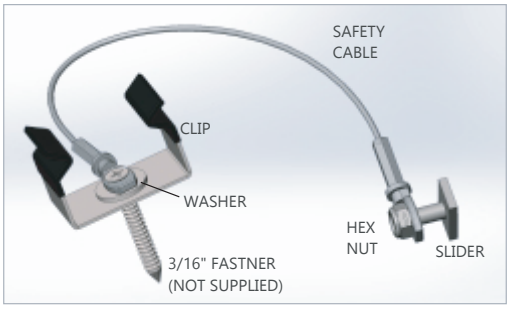
CAUTION: Leave a 2mm gap between fixtures



Fixture Length (L)*	Dimension D1		Dimension D2	
Nominal	mm	inch	mm	inch
600mm	200	8"	400	15 5/8"
900mm	500	20"	400	15 1/2"
1200mm	800	32"	400	15 1/4"
1500mm	1100	44"	400	15"

*includes 2mm gap between fixtures

2. **Ensure** that you have a pair of clip brackets. The bracket assembly consists of five components plus the fastener which is not supplied so that a surface appropriate one may be selected.



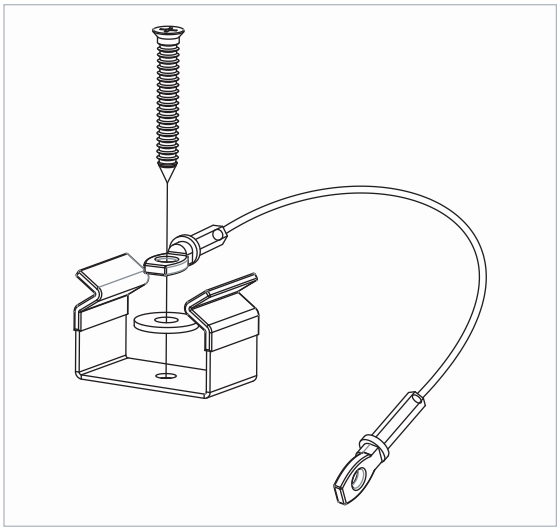
WARNING: Use mounting hardware suitable for the mounting surface. Use of inappropriate hardware may result in the dismounting of the bracket and can result in equipment damage, injuries, or death.

WARNING: Clip mounting hardware is not suitable for uses on vertical surfaces, use on vertical surfaces may result in dismounting of the fixture and can result in equipment damage, injuries, or death.

3. **Install** the clip brackets using the dimensions D1 and D2 from Step 1 as a guide. The head of the safety cable is asymmetric; ensure that the washer sits under the shallow side to mount the head of the safety cable flush to the clip. Test the safety cable to make sure the assembly is firmly secured in place.

Hardware Required (not supplied)

M5 or #3/16 screw



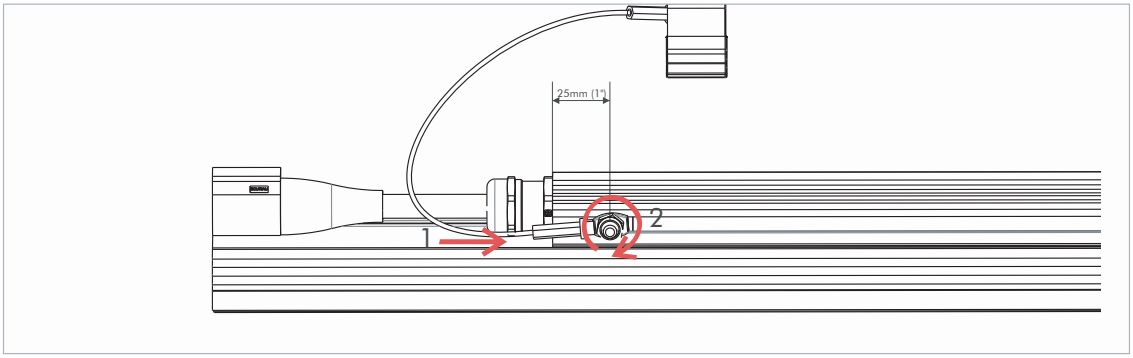
Specifications subject to change without notice. Every effort has been made to ensure that the information in this manual is accurate. GVA Lighting, Inc. is not responsible for printing or clerical errors.
Refer to www.gvalighting.com for additional information.

© GVA Lighting Inc. All rights reserved.

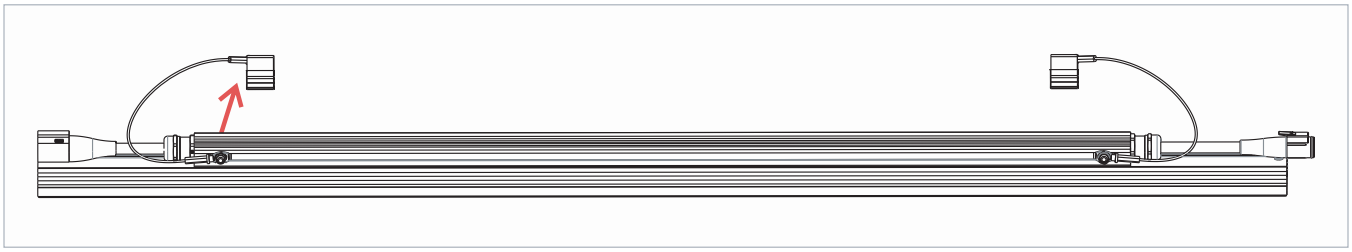
GVA Lighting, Inc. 2771 Bristol Cir, Oakville, Ontario, L6H 6X5, Canada
+1 905 569 6044 | support@gvalighting.com

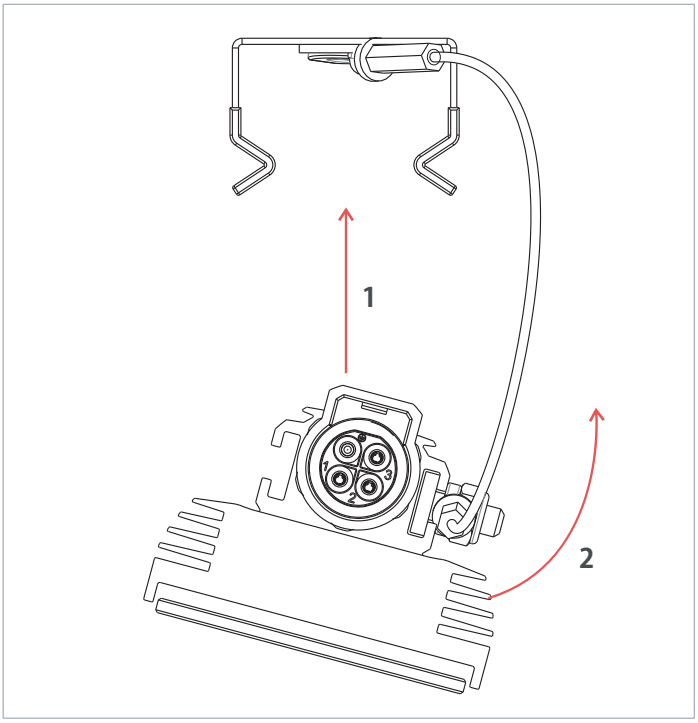
Clip Bracket Installation continued

4. **Insert** both sliders into the mounting slot on the fixture on either end of the fixture (1). Tighten the locknut using an M10 socket (2) firmly securing the slider about an inch from the edge of the fixture.



5. **Press** the fixture into the installed brackets one end at a time. Coming in on an angle and then twisting will help generate the necessary force to snap the fixture into place.





⚠ **WARNING:** Do not power luminaires until fully installed.

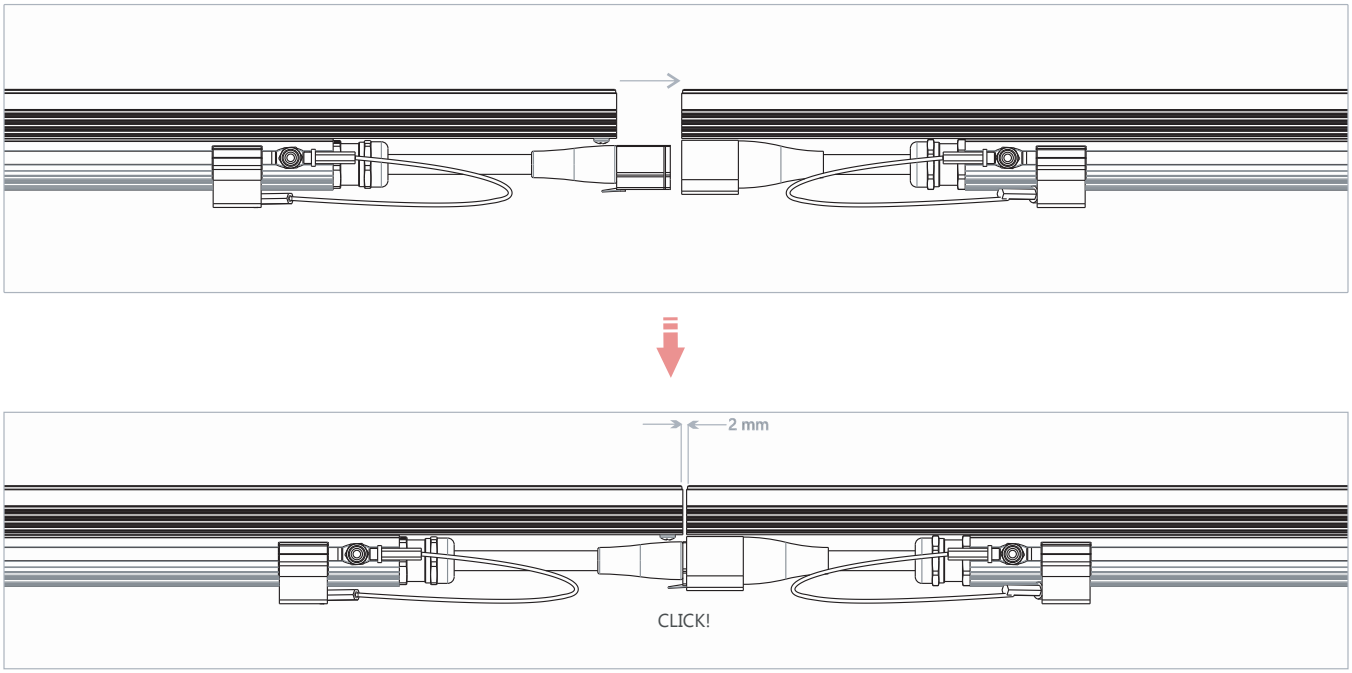
Specifications subject to change without notice. Every effort has been made to ensure that the information in this manual is accurate. GVA Lighting, Inc. is not responsible for printing or clerical errors.
Refer to www.gvalighting.com for additional information.

© GVA Lighting Inc. All rights reserved.

GVA Lighting, Inc. 2771 Bristol Cir, Oakville, Ontario, L6H 6X5, Canada
+1 905 569 6044 | support@gvalighting.com

Clip Bracket Installation continued

7. **Install** the next set of brackets along the run following steps 1 - 6. There is a small degree of linear adjustability enabling the maintenance of the 2 mm gap between fixtures, ensuring the maintenance of pitch and allowing enough room for thermal expansion. The connection between fixtures results in a sensitive and audible "click" when properly mated.



Specifications subject to change without notice. Every effort has been made to ensure that the information in this manual is accurate. GVA Lighting, Inc. is not responsible for printing or clerical errors.
Refer to www.gvalighting.com for additional information.

© GVA Lighting Inc. All rights reserved.

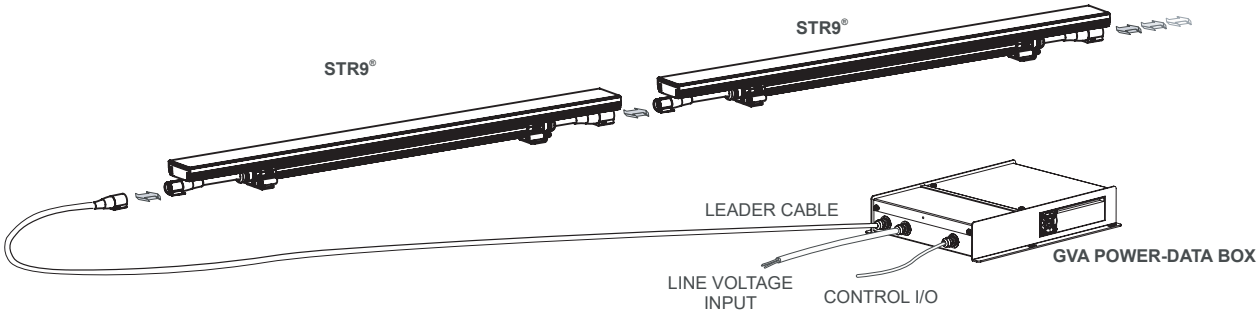
GVA Lighting, Inc. 2771 Bristol Cir, Oakville, Ontario, L6H 6X5, Canada
+1 905 569 6044 | support@gvalighting.com

Connecting Power and Data

⚠ **Caution:** Do not make or break connections while the fixtures are under power.

⚠ **Caution:** Power supply must be installed in a suitable location, refer to label

1. **The STR9®** is easily wired together by connecting the power supply or power-data box to the fixtures using the supplied leader cables. The fixtures are then connected together, either end to end or using double ended jumper cables to span gaps. The power supply/ power-data box is powered by connecting it to the mains. Dimming control, if required, is also connected to the power-data box.



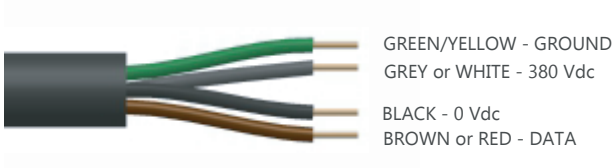
2. At the end of the line a cap must be placed on the last receptacle to remove the risk of shock and protect the fixture from water ingress

Field Wiring Connections Diagram for STR9® and PDB - 2000

⚠ **WARNING:** Electrical shock hazard. The DC conductors of this system are ungrounded and may be energized. Ensure 380Vdc power supply is turned OFF before making any connections. Connecting the luminaire while the power is turned ON may result in equipment damage, personal injuries or death.

1. **INFINITY™** fixtures are connected using four conductors: ground (green/yellow), 0 Vdc (black), 380 VDC (grey), and a data line (brown) using a proprietary ZH protocol. Should you need to troubleshoot the connections, the following pinouts may be useful:

INF Receptacle



Wires with their respective signals

The connections of the leader cable is continued on the next page...

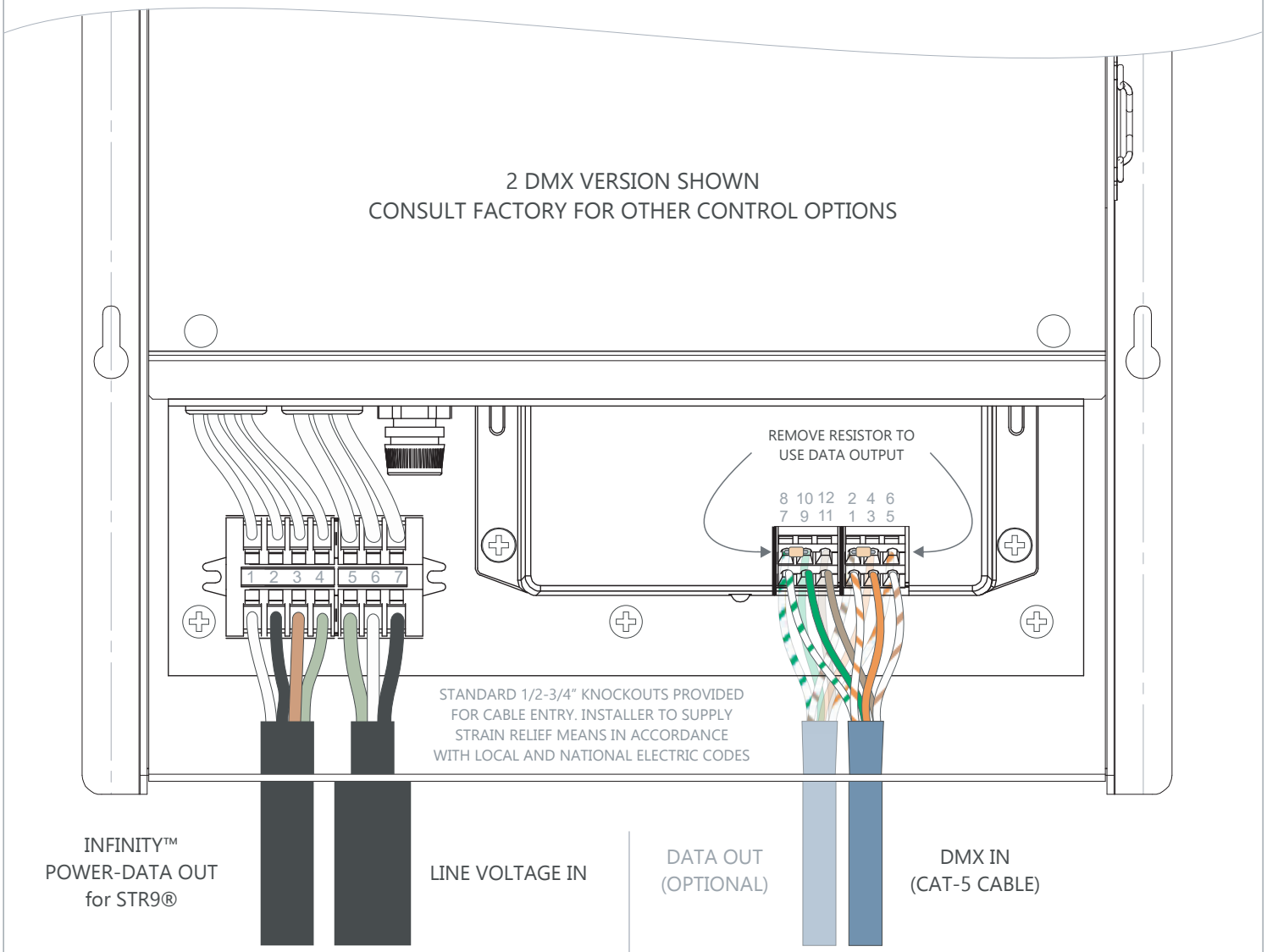
Specifications subject to change without notice. Every effort has been made to ensure that the information in this manual is accurate. GVA Lighting, Inc. is not responsible for printing or clerical errors.
Refer to www.gvalighting.com for additional information.

© GVA Lighting Inc. All rights reserved.

GVA Lighting, Inc. 2771 Bristol Cir, Oakville, Ontario, L6H 6X5, Canada
+1 905 569 6044 | support@gvalighting.com

Field Wiring Connections Diagram for STR9® PDB - 2000 continued...

2. **The Power Data Box is connected as follows.** Ensure that the mains connection is not live when connecting the fixture. Color-coding of the mains cable may vary depending on location.



7 POSITION POWER IN-OUT TERMINAL BLOCK

1. +380 V DC - **GREY or WHITE**
2. 0 Vdc - **BLACK**
3. ZHD DATA - **BROWN or RED**
4. GROUND **- GREEN**

5. LINE IN GROUND - **GREEN or GREEN/YELLOW**
6. LINE IN NEUTRAL - **WHITE**
7. LINE IN LIVE - **BLACK or RED**

6 POSITION DATA IN/OUT TERMINAL BLOCK

1. DATA 1 (+) IN - **WHITE/ORANGE**
2. DATA 1 (+) OUT - **RESISTOR OR WHITE/ORANGE**
3. DATA 1 (-) IN - **ORANGE**
4. DATA 1 (-) OUT - **RESITOR OR ORANGE**
5. COMMON 1 IN - **WHITE/BROWN**
6. COMMON 1 OUT - **WHITE/BROWN**

7. DATA 2 (+) IN - **WHITE/GREEN**
8. DATA 2 (+) OUT - **RESISTOR OR WHITE/GREEN**
9. DATA 2 (-) IN - **GREEN**
10. DATA 2 (-) OUT - **RESITOR OR GREEN**
11. COMMON 2 IN - **BROWN**
12. COMMON 2 OUT - **BROWN**

resistor is installed by default at factory, remove to use data output terminals.

Specifications subject to change without notice. Every effort has been made to ensure that the information in this manual is accurate. GVA Lighting, Inc. is not responsible for printing or clerical errors.
Refer to www.gvalighting.com for additional information.

© GVA Lighting Inc. All rights reserved.