

This guide is to aid architects and specifiers in selecting qualified contractors.

Installation should be carried out by qualified paving contractors experienced in the installation of interlocking concrete pavement systems. Preferably ICPI certified.

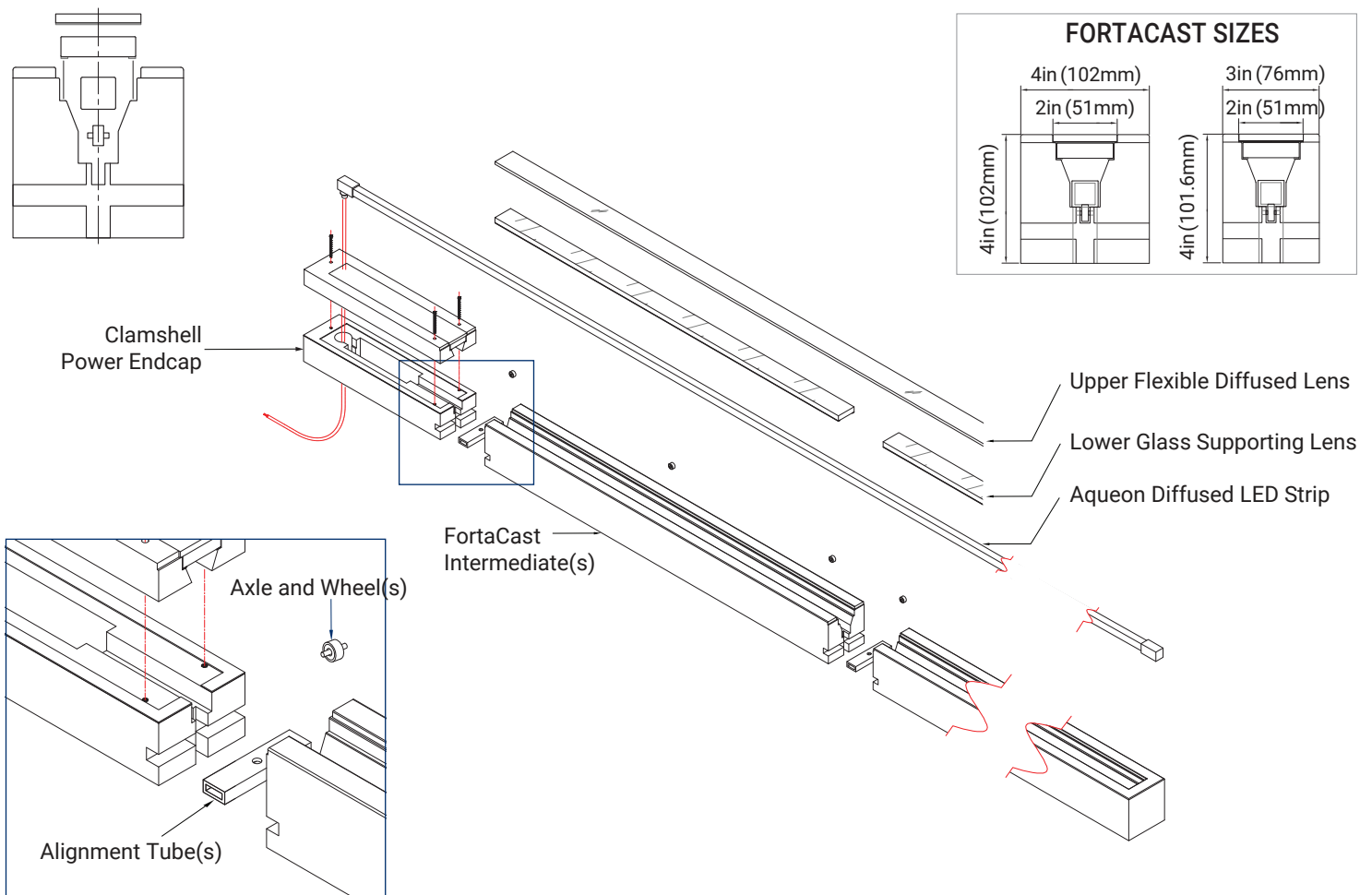
Subcontractors should submit evidence of skill and have not less than 5 years of experience in this product type. For more information visit <https://icpi.org/guides-specifications>

The installer has the final responsibility for the ground structure and proper drainage of FortaCast.

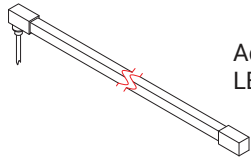
**Organic Lighting Systems, Inc.** is the manufacturer of FortaCast and not an installer. Organic Lighting Systems, Inc. is not responsible for defects that are not related directly to the manufacture of FortaCast. The following serves as a guide for installing FortaCast fixtures and does not imply approval of materials other than those supplied by Organic Lighting Systems, Inc. Installation methods specified herein are provided as a guide only.

**Electrical installation:** A qualified electrical contractor is required to provide 24VDC power. Power supplies must be located in a dry location or a sealed waterproof housing and cord lengths specified to reach those locations. Aqueon is a submersible lighting strip with factory made connections. Installation and field connections must be liquid tight and installation is the electrical contractor's sole responsibility.

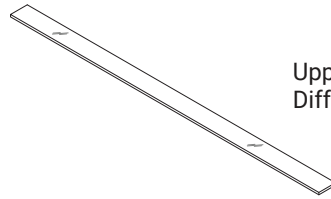
## FORTACAST COMPONENTS AND ASSEMBLY OVERVIEW



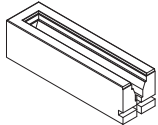
## PACKAGE MAY INCLUDE



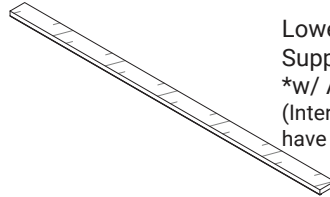
Aqueon® Diffused  
LED Strip(s)



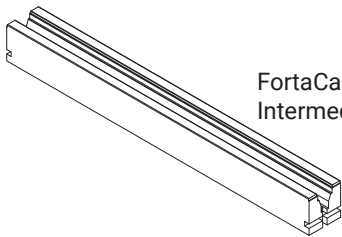
Upper Flexible  
Diffused Lens



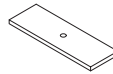
FortaCast®  
End Cap(s)



Lower Glass  
Supporting Lens  
\*w/ Adhesive Tape  
(Interior projects may  
have acrylic supporting lens)



FortaCast®  
Intermediate(s)



Alignment Len(s) 3"L  
\*w/  $\varnothing$ 5/16 thru hole



Alignment Tube(s) W/  
5/16-18 threaded hole  
\*Provides Vertical &  
Horizontal drainage



Alignment bolt(s) 3"L  
\*w/ 5/16-18 thread size



Axle and Wheel(s)



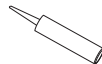
Protective Cover  
Tape Roll(s)



Allen Wrench  
\*1/4" drive size



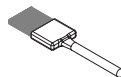
Silicone Sealant(s) Clear  
\*Loctite



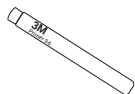
Titebond Sealant(s)  
\*matches fortacast trim color



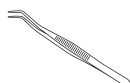
MVIS Air & Water  
Barrier Sealant



Brush



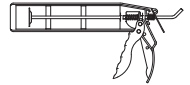
3M Primer Pen\*



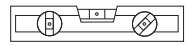
Tweezers

## TOOLS NEEDED BY OTHERS

Sealant Gun



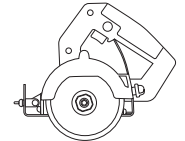
Level



Blade



\*\*Wet Saw w/  
Diamond Blade  
(for field cutting  
purposes)



Ruler



### \*\*Wet Saw with Diamond Blade:

The Paving contractor can field-cut glass and/or FortaCast similar to cutting tile.  
<https://www.lowes.com/n/how-to/-cut-tile-with-a-wet-saw>

### \*3M Primer Application:

Shake 3M primer 94 well before using. Apply a thin uniform coating to the bonding surface using the minimum amount that will fully coat the surface. Allow 3M primer 94 to dry thoroughly before applying tape. This is usually accomplished in 5 minutes at room temperature.

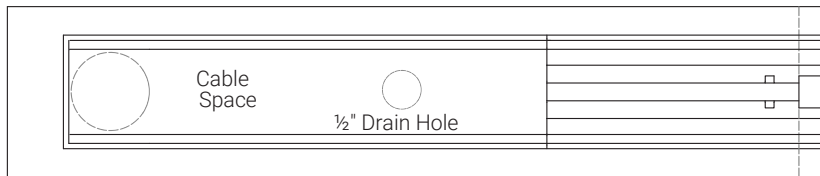
## Installation Instructions



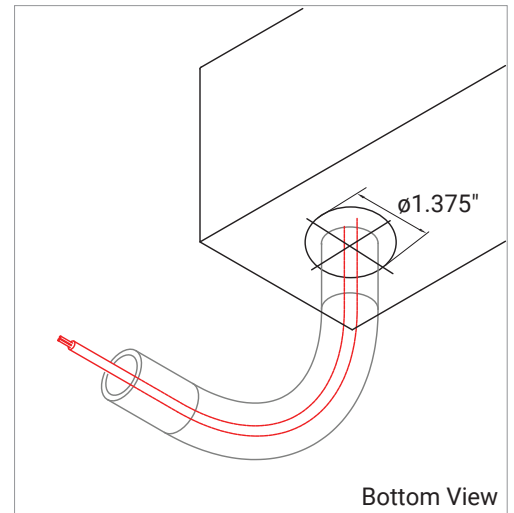
**Electrical installation:** A qualified electrical contractor is required to provide 24VDC power. Power supplies must be located in a dry location or a sealed waterproof housing and cord lengths specified to reach those locations. Aqueon is a submersible lighting strip with factory made connections. Installation and field connections must be liquid tight and installation is the electrical contractor's sole responsibility.

### 1 Set the first FortaCast section into place

- Set the first FortaCast section into place (usually-power location/end cap).
- ½" conduit must stub into the  $\varnothing 1.375"$  thru hole under FortaCast for power.



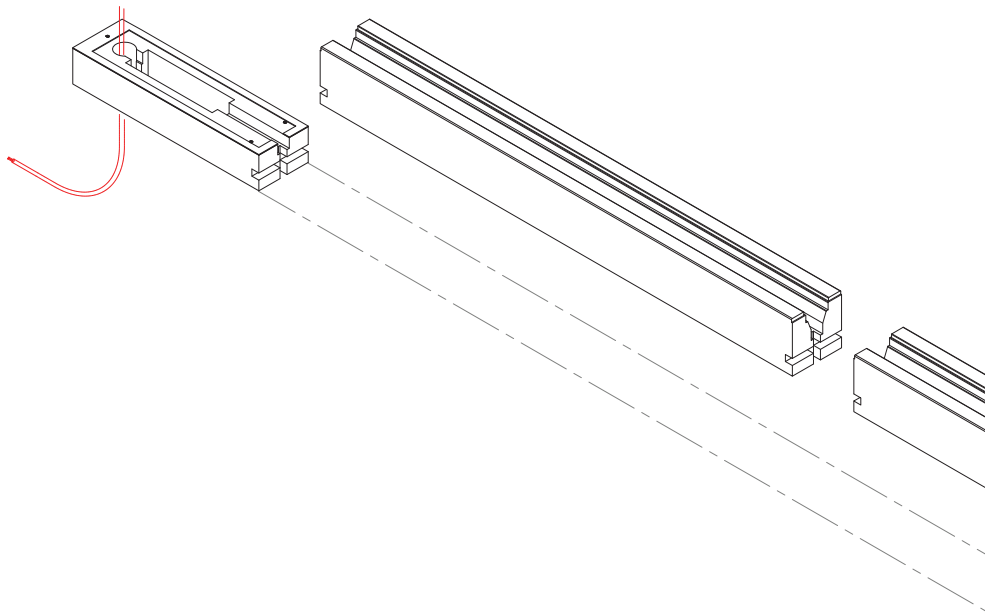
Top View of Lower  
Clamshell power  
entry endcap



Bottom View

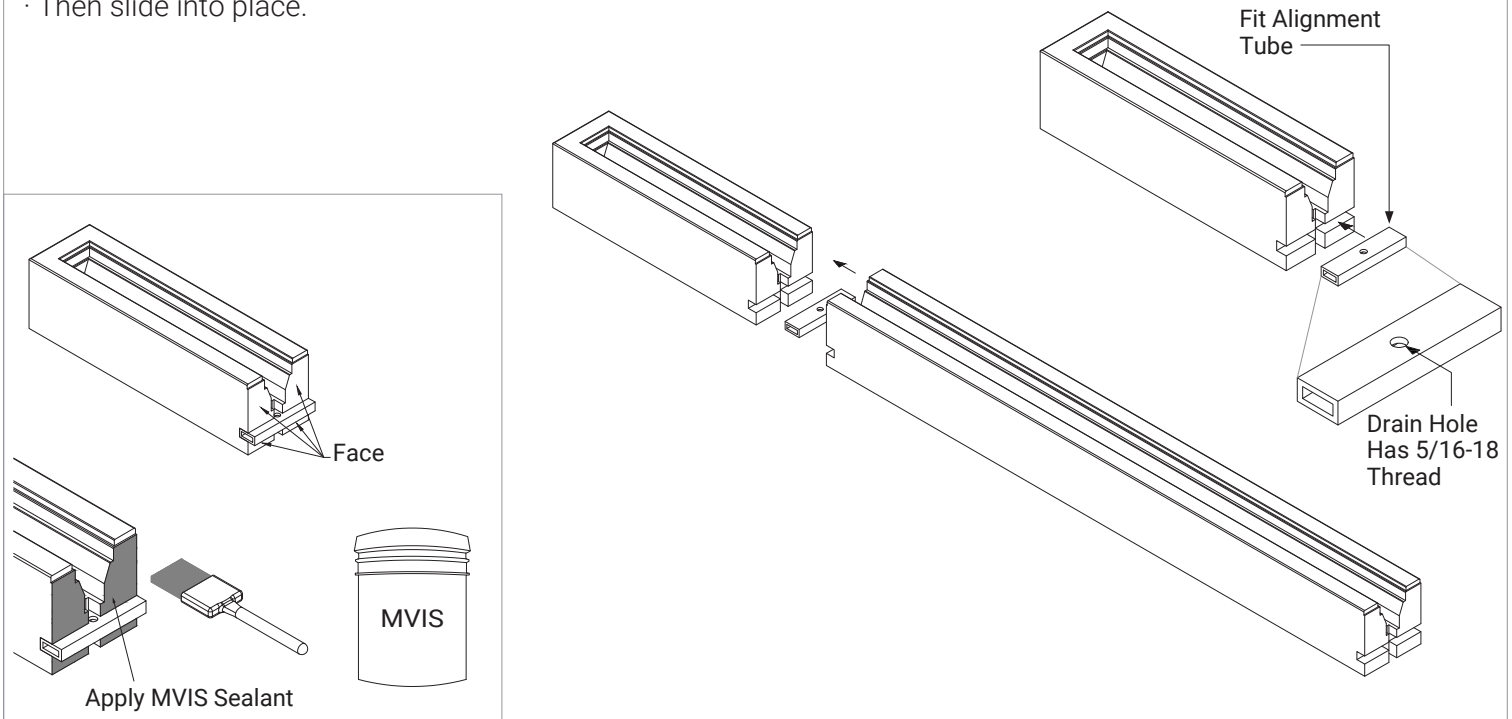
### 2 Lay out all connecting sections(s)

- Lay out all the connecting sections of the straight line to one side of their final location or in its proposed place to check layout.



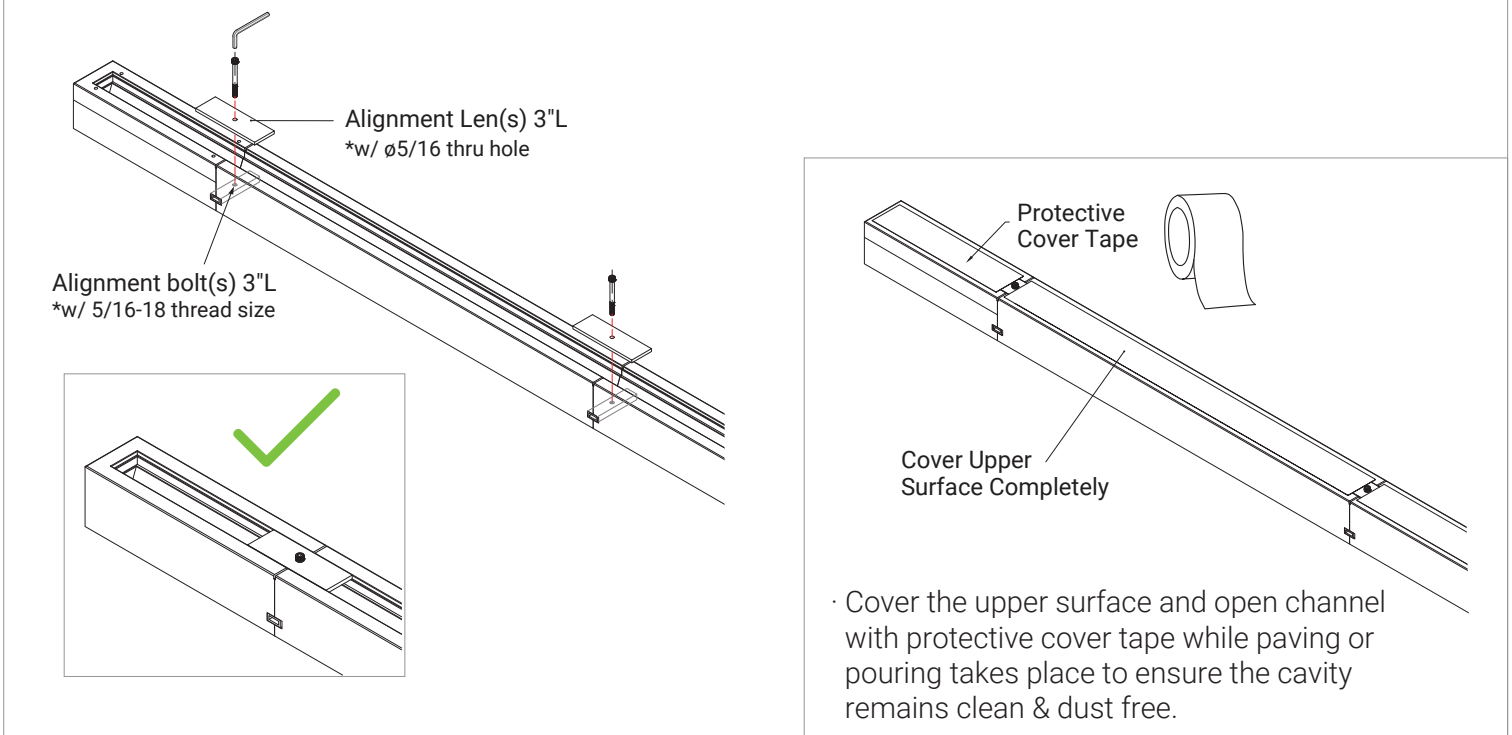
## 3 Insert Alignment Tube & apply Laticrete MVIS Sealant

- Insert the Alignment Tube to level the FortaCast sections.
- Make sure FortaCast section face is dry, clean and dust free. Then apply a thin layer of Laticrete MVIS Sealant to both faces of the connecting sections using a brush.
- Then slide into place.



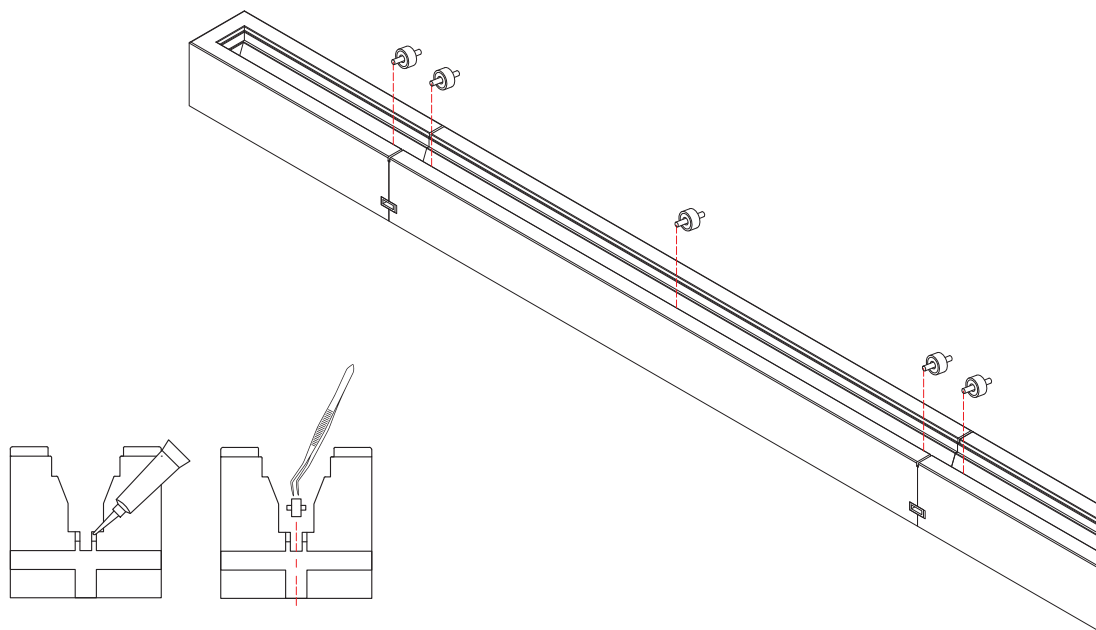
## 4 Install Alignment Lenses

- Insert short acrylic Alignment Lenses across section joints to help accurately align fixtures by bolting the Alignment Lens to the Alignment Tube using an Allen Wrench.



## 5 Place Axle(s) in the wheel(s)

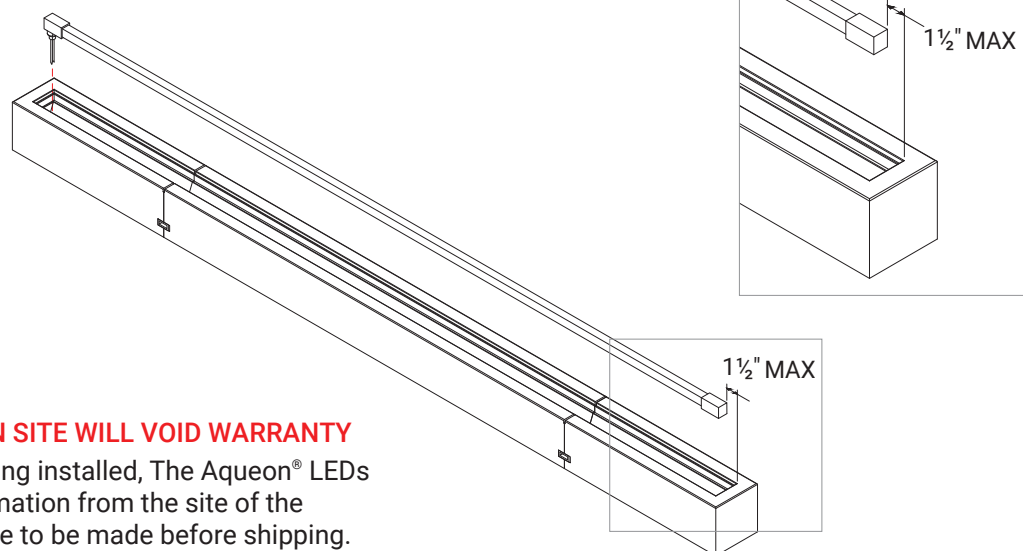
- Place a small amount of **Clear Silicone** into the FortaCast axle cavities, along the bottom of the FortaCast channel. **CAUTION: THE SILICONE BEAD MUST NOT EXCEED THE HEIGHT OF THE AXLE CAVITY!**
- Place the wheels in the cavities channel using tweezers.



## 6 Lay Out Aqueon LED Strip(s) - Ensure Correct Lengths

**READ AQUEON LED GUIDELINES ON PAGE 8 PRIOR TO THIS STEP.**

- Lay out the Aqueon LED strip(s) to the full length of the FortaCast run, and check that it fits with no more than 1½" clearance from each end. If the strips are too long, they must be returned to Organic Lighting® to be cut and resealed.
- If the strip(s) are too short and greater than 1½" gap at the ends, there will be a shadow (in this case - accurately measure the full length of the run and reorder strips to the appropriate lengths).
- If they are the correct size, then install LED strip in channel.
- Test LED powers on before proceeding to step 7.



**WARNING: CUTTING LED STRIPS ON SITE WILL VOID WARRANTY**

**NOTE:** When complex shapes are being installed, The Aqueon® LEDs may be held at the factory for confirmation from the site of the installed run lengths. Adjustments are to be made before shipping.

## 7 Install Lower Glass Lenses

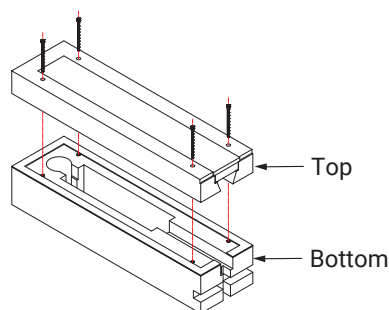
Starting at the end of the run, install Lower Glass Lens(s) permanently except for the Power Entry Lens, which should be placed in the Power Entry Endcap without removing the adhesive backing until the full installation is complete and tested.

· **METHOD: TAKE CARE! ONCE IN PLACE, THE LENS IS PERMANENT AND CANNOT BE MOVED.** Peel off the adhesive backing of the acrylic adhesive tapes on the edges of the laminated Glass Lens.

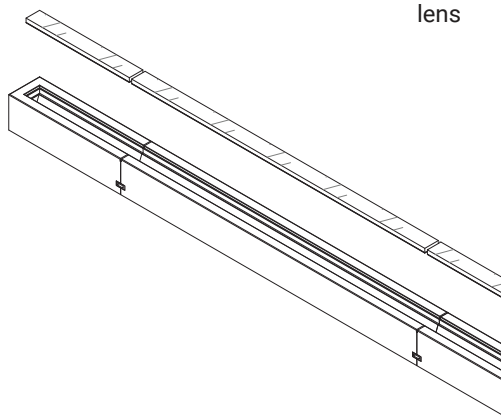
· **DO (1) GLASS LENS AT A TIME!**

· Each Glass Lens fit with the full FortaCast section.

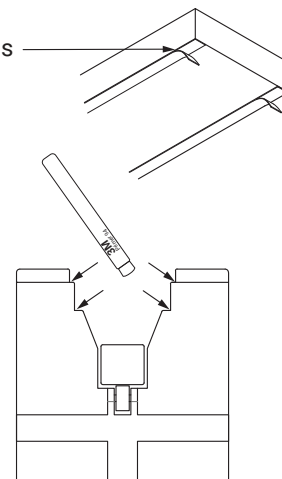
### CLAMSHELL POWER ENDCAP ONLY



Lenses on clamshell power endcaps are already pre-installed.



Adhesive strip on underside of glass lens



**MUST! ENSURE THAT THE FORTACAST FIXTURES AND LENS SHOULDERS ARE CLEAN AND DRY BEFORE SETTING INTO PLACE.** (WIPE WITH ALCOHOL TO ENSURE ADHESION) AND APPLY 3M PRIMER USING THE PEN PROVIDED.

## 8 Install Flex Lens(es)

· **FOR EXTERIOR INSTALLS** - Upper Flex Lens must be installed at a local mean temperature. (For example: CA, NV, AZ: 70°F OR IL, OH, NY: 50-70°F). Do not install at high temperatures.

· Test Upper Flex Lenses for size before removing the adhesive backing.

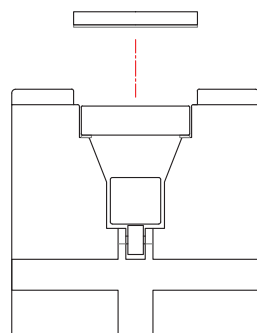
· Start at the power input location using the special lens marked 'Power'.

· Upper Lens should always cover the Lower Lens & fixture section joints (at least by 2").

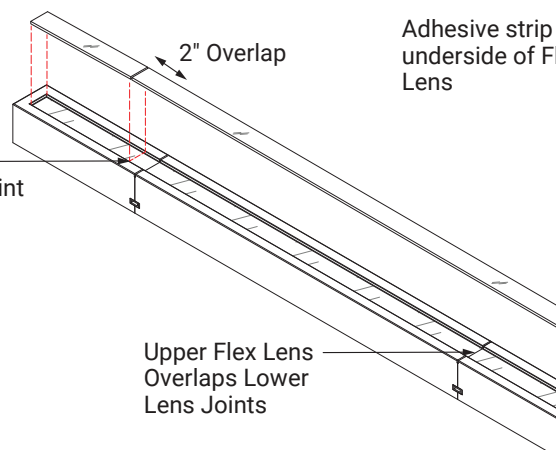
· After checking that all lenses cover joints, you are ready to peel off backing and install! **ONCE INSTALLED, THE LENSES ARE PERMANENT!**

· **MUST DO ONE LENS AT A TIME!** Go slow and butt them together, leaving no gaps.

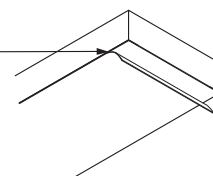
· On the last Flex Lens, if it is too long, do not remove the adhesive backing. Use a t-square or ruler to mark the cut (cut must be straight) and cut carefully with a sharp blade.



Upper Flex Lens Overlaps First Joint on Power Input

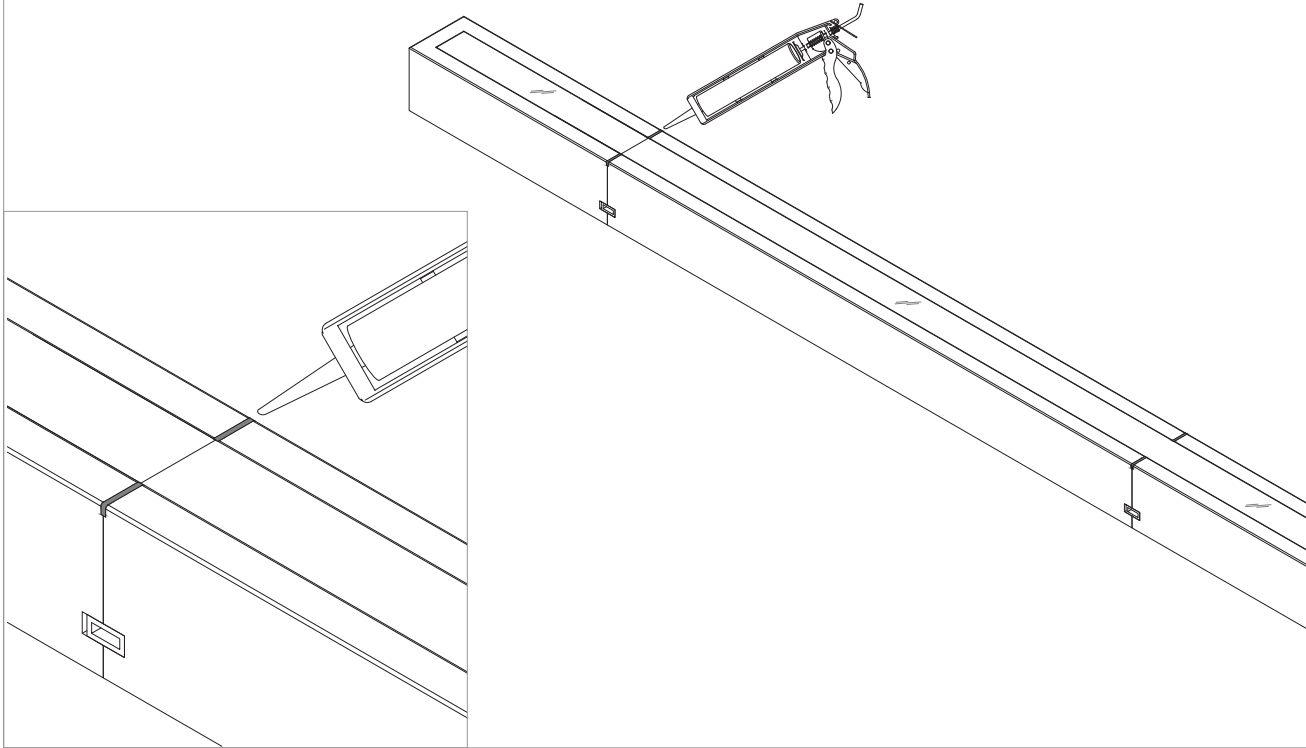


Adhesive strip on underside of Flex Lens



## 9 Seal and Bond Leveling Gap

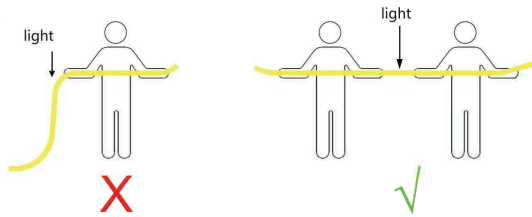
- Seal and bond the ¼" gap between each FortaCast with **Titebond Sealant** using the sealant gun (alternatively use tile grout). \*Sealant will match FortaCast trim color.
- Finally, clean any excess sealant or dirt on the FortaCast and wipe the Upper Flex Lenses with a damp cloth.



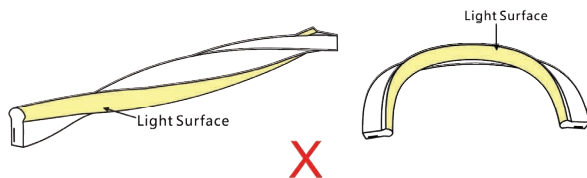


## NOTE

Once you have chosen a lighting configuration and finished making necessary connections, mounting of flex ribbon light longer than 6.56ft requires min. two electricians. One electrician mounts the flex ribbon light and the other is supporting the roll. Twisting or bending the flex ribbon light over defined min. bending diameter during mounting can damage inside circuit board and LEDs.



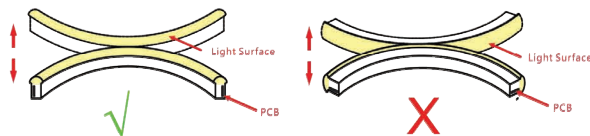
### 1. Twisting the light is forbidden



**WARNING:** The above wrong approach will cause damage to the light.

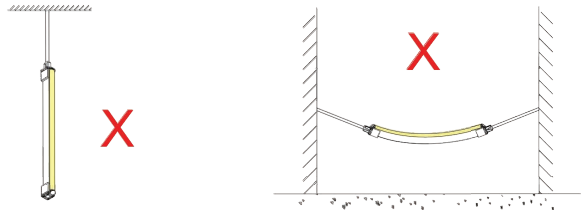
### 2. Correct bending way

For side view light:

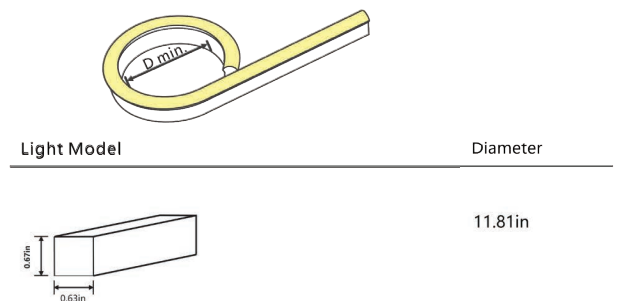


### 3. The installing ways illustrated by the following pictures are forbidden.

Choose appropriate mounting profile to install. Do not hang or suspend in the air.



### 4. Minimum bending diameter



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This page is included as a guide for general contractors and other installers of the need for proper bedding preparation for the installation of FortaCast concrete sections and FortaCast drive over lighting fixtures. Information in this guide is a simplified version of the full ICPI (Interlocking Concrete Pavement Institute) guide to installing precast pavers; They are to serve as a guide for specifiers and architects.

For more information visit <https://icpi.org>

