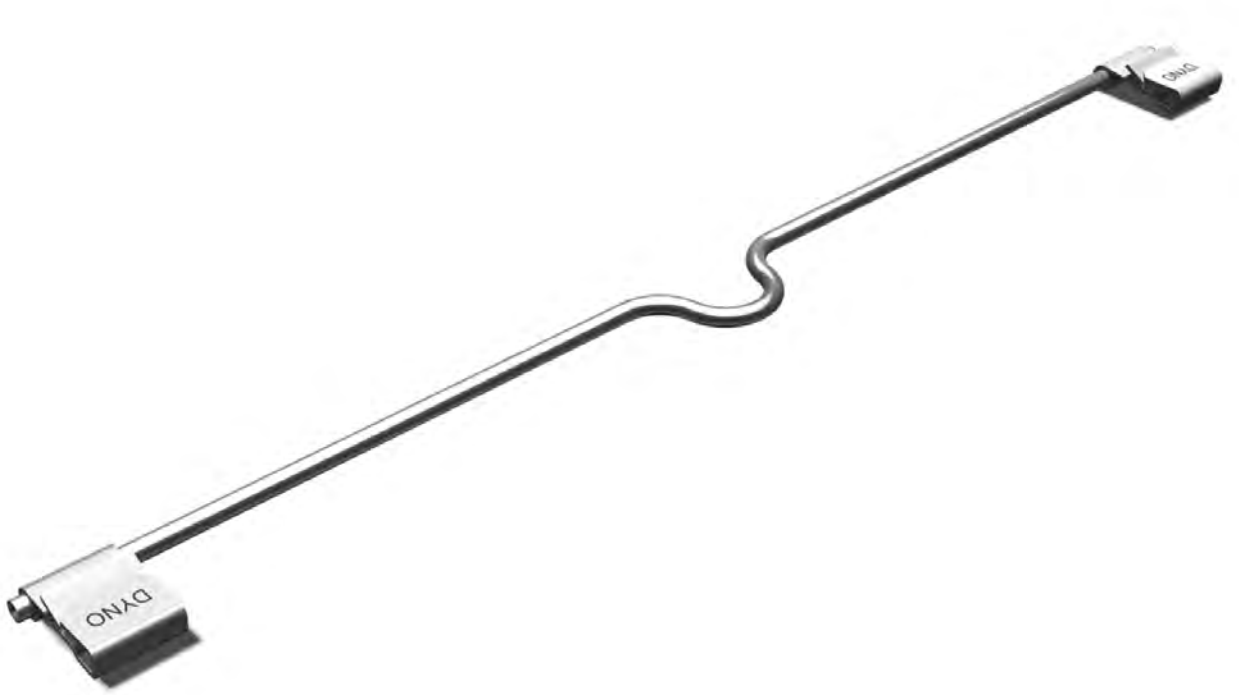
DYNOBOND™



DynoBond™

Installation Manual

UL 2703 and UL 467
Recognized

Publication Number 070115

866.682.0503| dynobond.com

Installer Responsibilities:

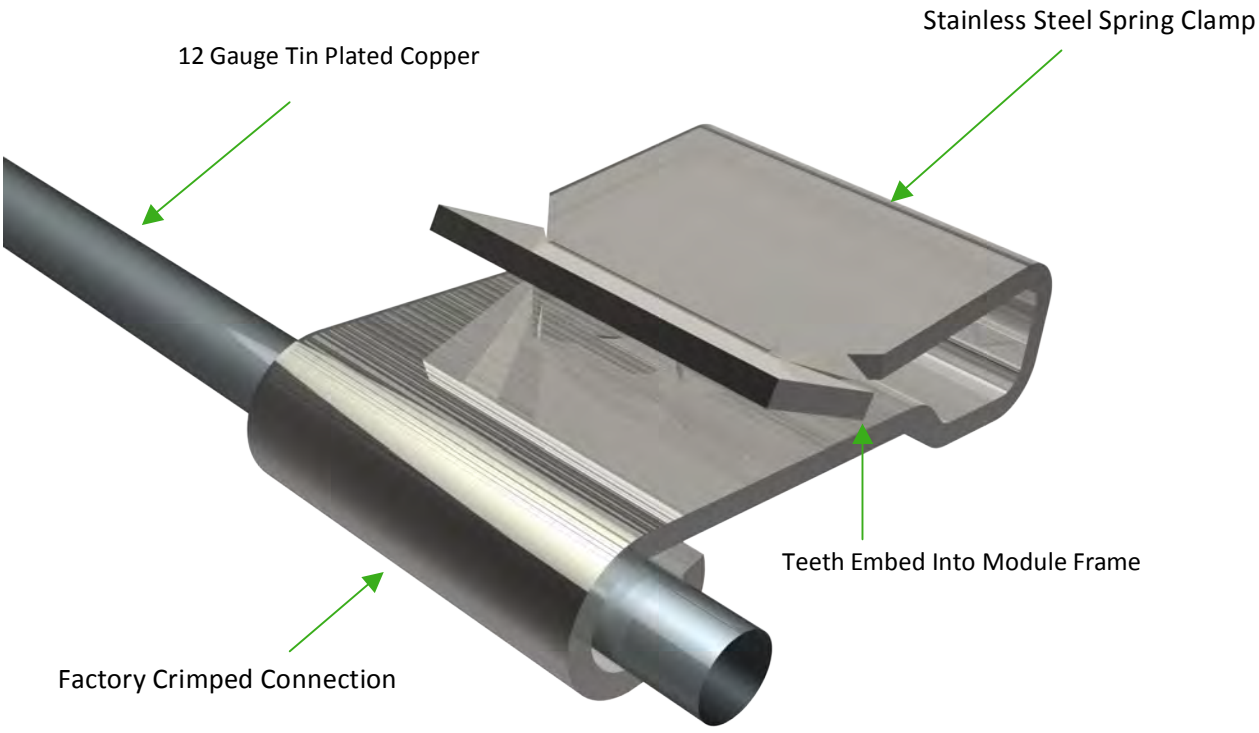
Thank you for choosing the DynoBond, an innovative technology used for bonding modules together which creates a streamlined equipment ground path. It is designed to penetrate the anodized coating on solar modules. The DynoBond consists of two stainless steel spring clamps and a tin plated wire ordered in 8", 12", 38", 76", and 96" lengths.

The DynoBond is engineered for commercial and residential applications. The proprietary design allows the DynoBond to be used as a jumper between modules, making the module frames the medium for the equipment ground path.

The DynoBond was designed by installers in the field and engineered for optimal performance. The DynoBond will save on installation costs due to its universal design and preassembled nature. No more cutting various length wire to thread through individual grounding lugs. The DynoBond offers a clean aesthetic look on the roof and greatly decreases installation time.

To insure that the DynoBond is installed properly and is functional, it is important to adhere to the following guidelines set forth in this manual. The DynoBond is for one time use. If a DynoBond is removed for any reason a new DynoBond must be used for replacement.

Product Highlights:

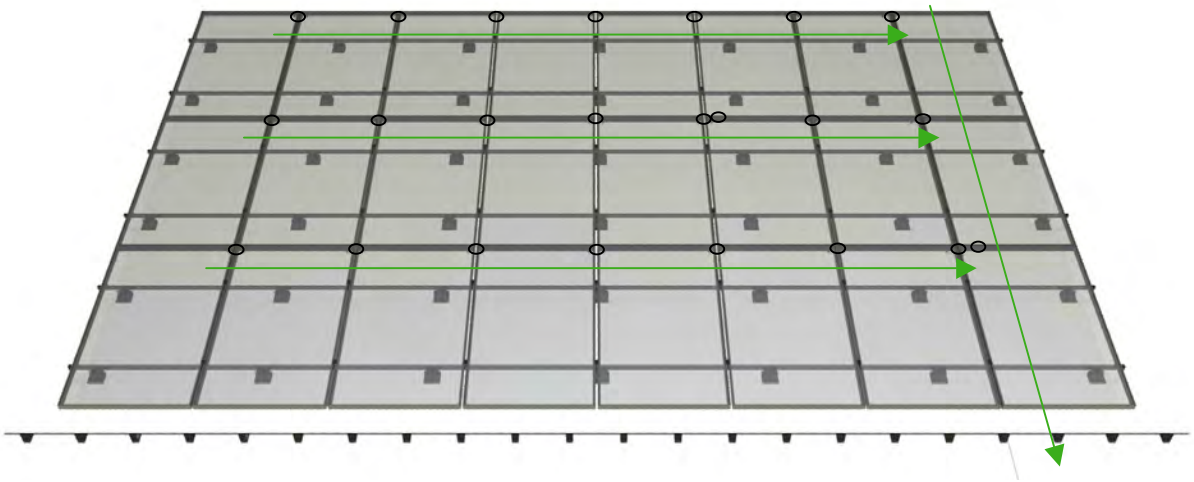


DynoBond Installation Instructions:

The DynoBond's versatility allows the modules to be mounted in portrait or landscape. The 12 gauge wire permits various mounting positions. Installing the DynoBond is as simple as locating the bottom lip flange of the module and fitting it with the spring clip. Please take proper time to plan the installation correctly. Two examples will be shown.

Pitched Roof Installation:

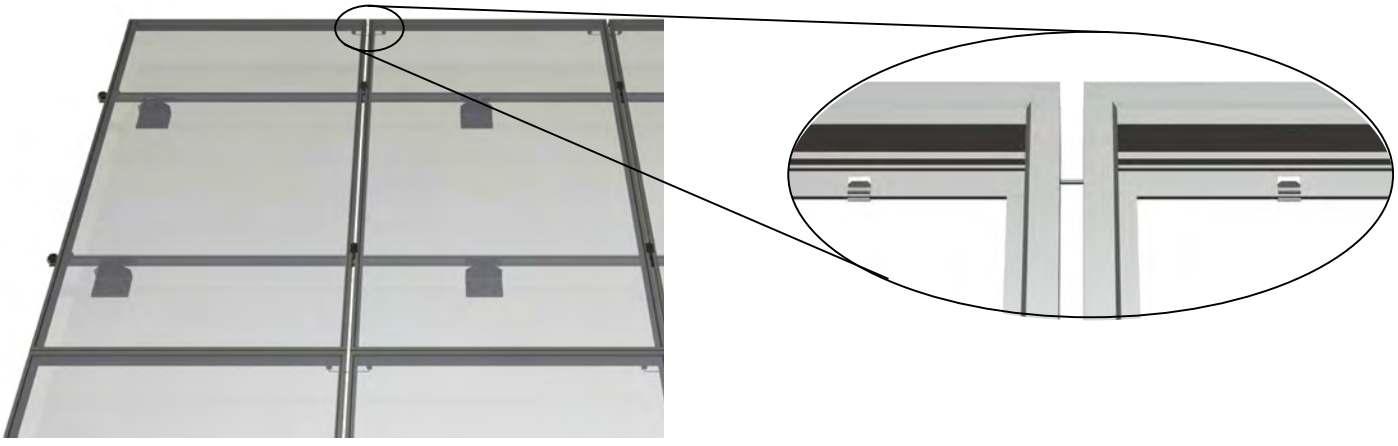
Step 1: Begin by charting your installation. In this example, the system consists of 3 rows of 8 modules per row totaling 24 modules shown in portrait. The DynoBond is installed in the same manner for pitched roof systems mounted in landscape. The homerun wires are shown exiting the system at the southeast corner of the array. The DynoBond will be installed to connect the modules west to east across each individual row. The DynoBond will also be connected on a row to row basis from North to South to bridge each row together. The DynoBond is used as a jumper between modules. The highlighted circles are the location of DynoBonds for this specific installation. The DynoBond can be installed while installing the modules or if space permits after the module installation is completed.



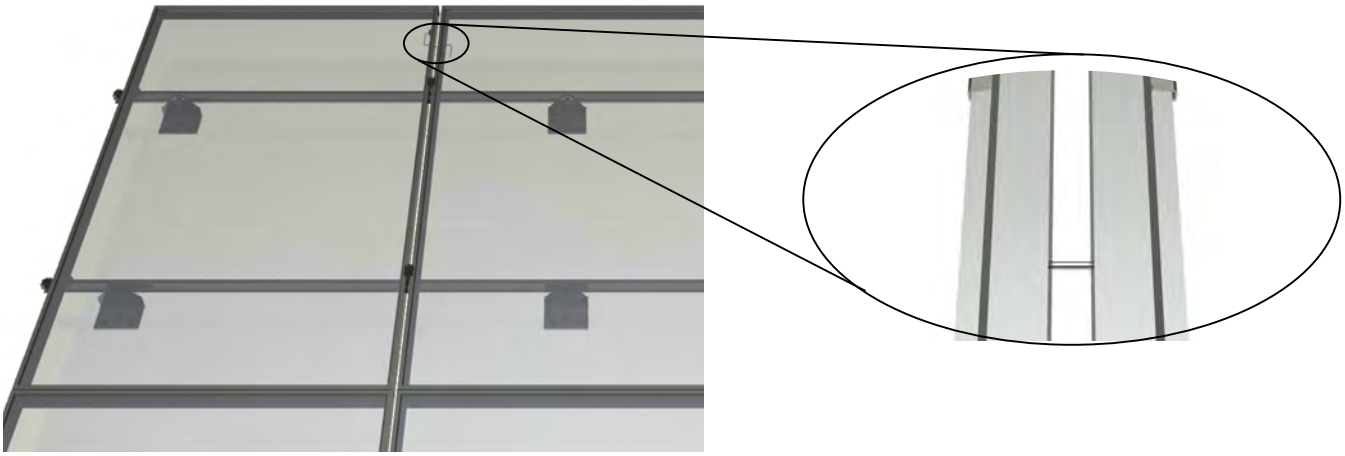
Exits with Homerun Wiring

Step 2: Locate the DynoBond between your first set of modules. The DynoBond penetrates the anodization of the modules' frames bonding them together. The DynoBond is used as a jumper between modules acting as a bridge for the equipment ground path. The connection points can be made along either the short or long sides of the panels granted the frame is the same on all four sides of the module.

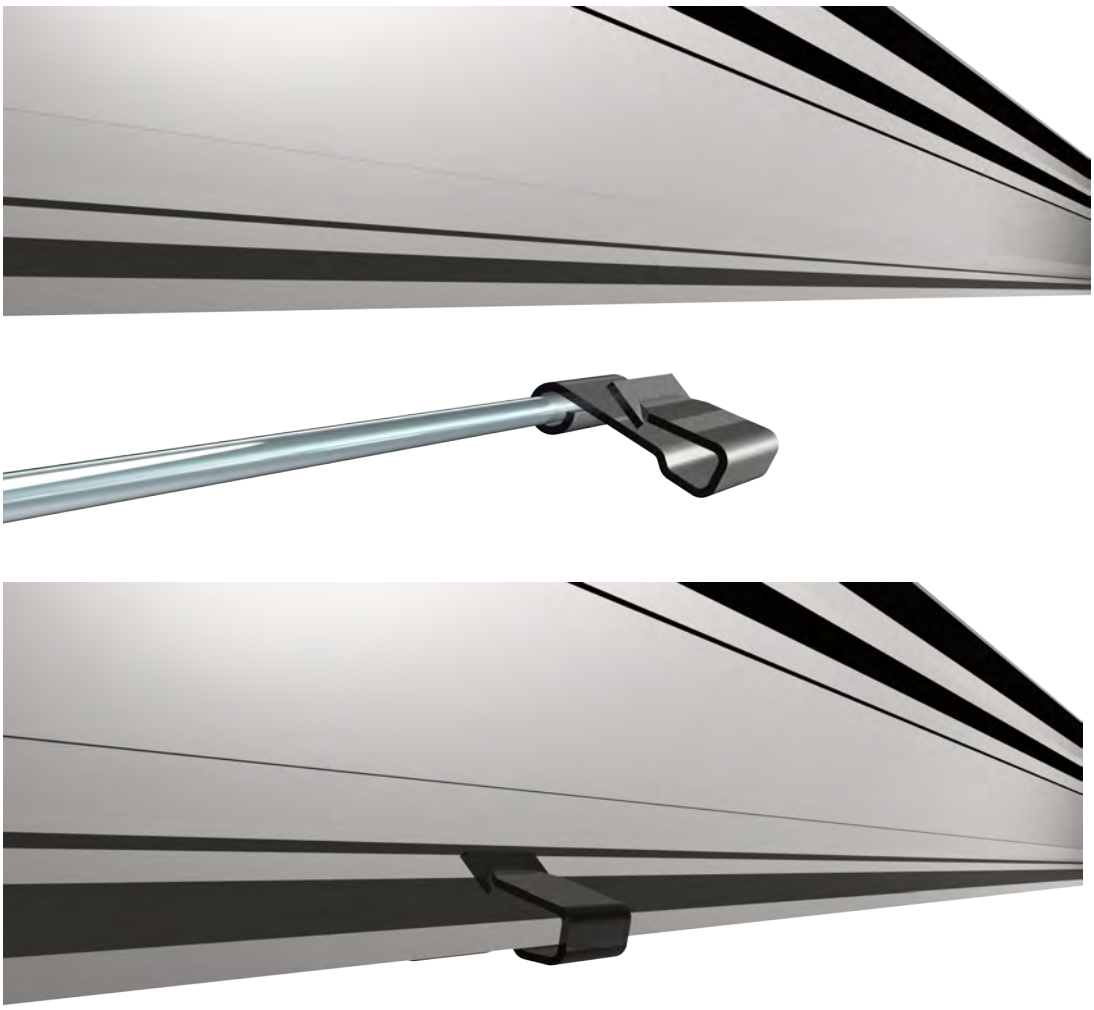
A. Short Side Connection:



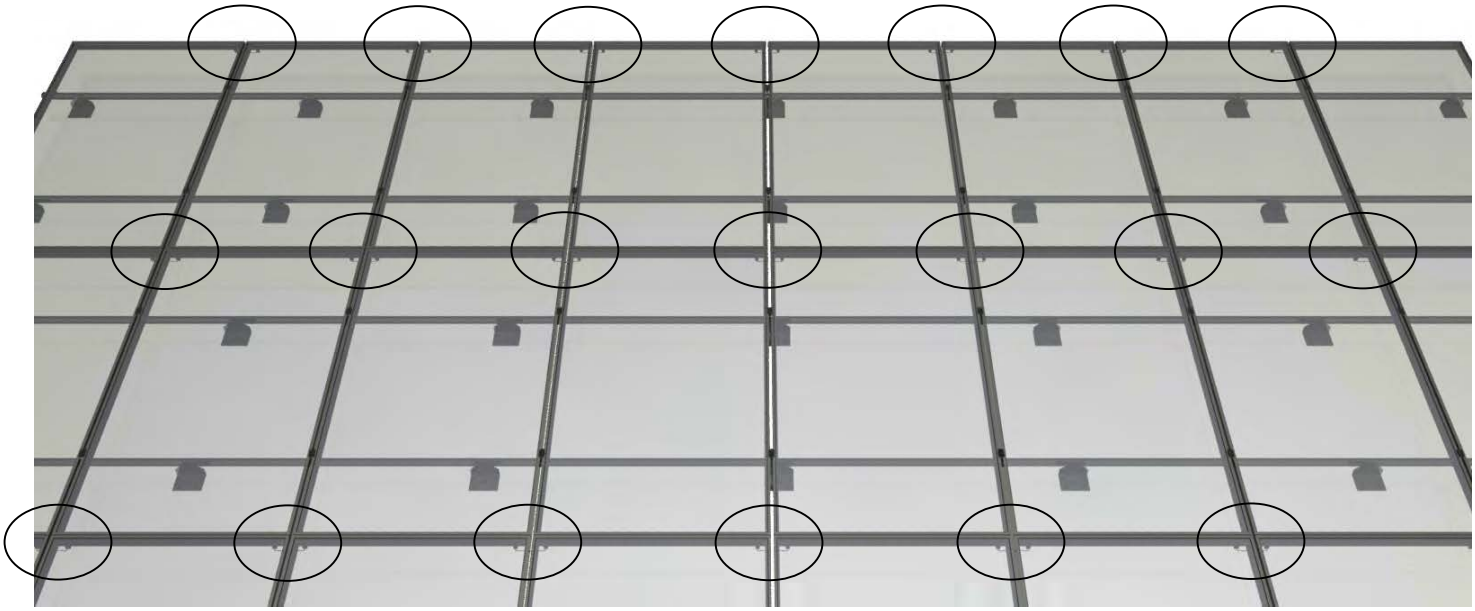
B. Long Side Connection:



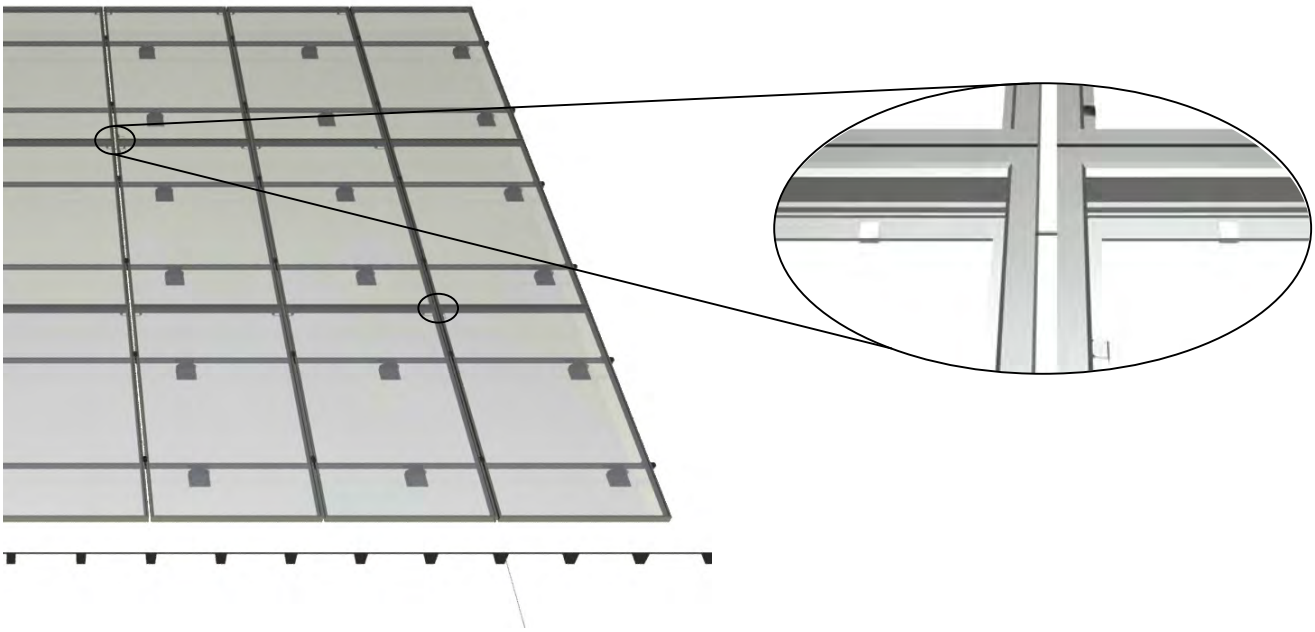
Step 3: Position the DynoBond on the bottom lip flange of the first module. To engage the module frame fit the module's bottom lip flange between the toothed section of the stainless steel spring clamp. Next, fit the adjacent module with the free end of the DynoBond. Leave slack in wire for expansion and contraction of module frame.



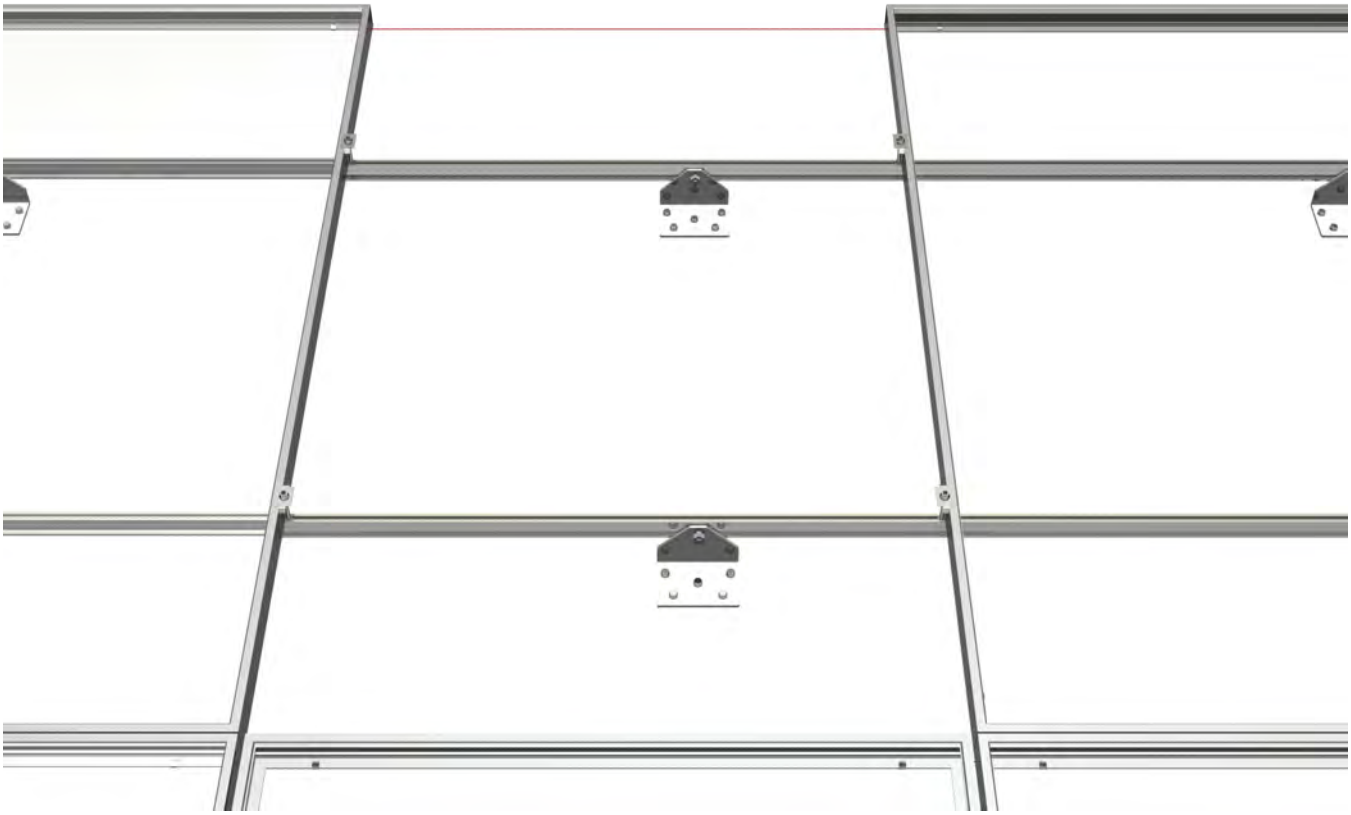
Step 4: Continue connections between modules across each individual row. This is shown in the below diagram circled in black.



Step 5: The DynoBond is a versatile solution able to follow the array layout on any installation. After the modules have been bridged across the row it is time to connect each row together. One DynoBond is needed to connect one row to the next. The connection does not need to be in a straight column. It can be staggered following the contours of the installation. The only requirement is that all rows are interconnected together by at least one point. Please see diagram below for an example of staggered inter row bridging. Connection points are highlighted with black circles.

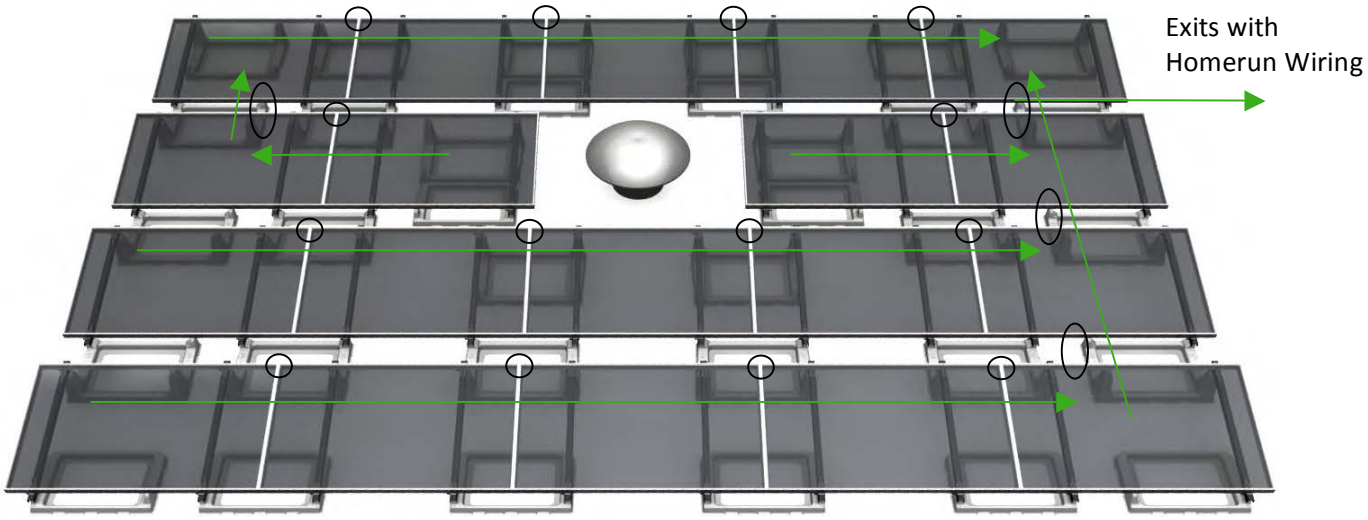


Step 6: The homerun equipment ground wire can be landed via a grounding lug attached to a grounding point of a module anywhere throughout the array. Please keep in mind if a panel is removed within the array at any point for maintenance or service a DynoBond should be placed to maintain ground continuity. This replacement DynoBond is highlighted in red for clarity.



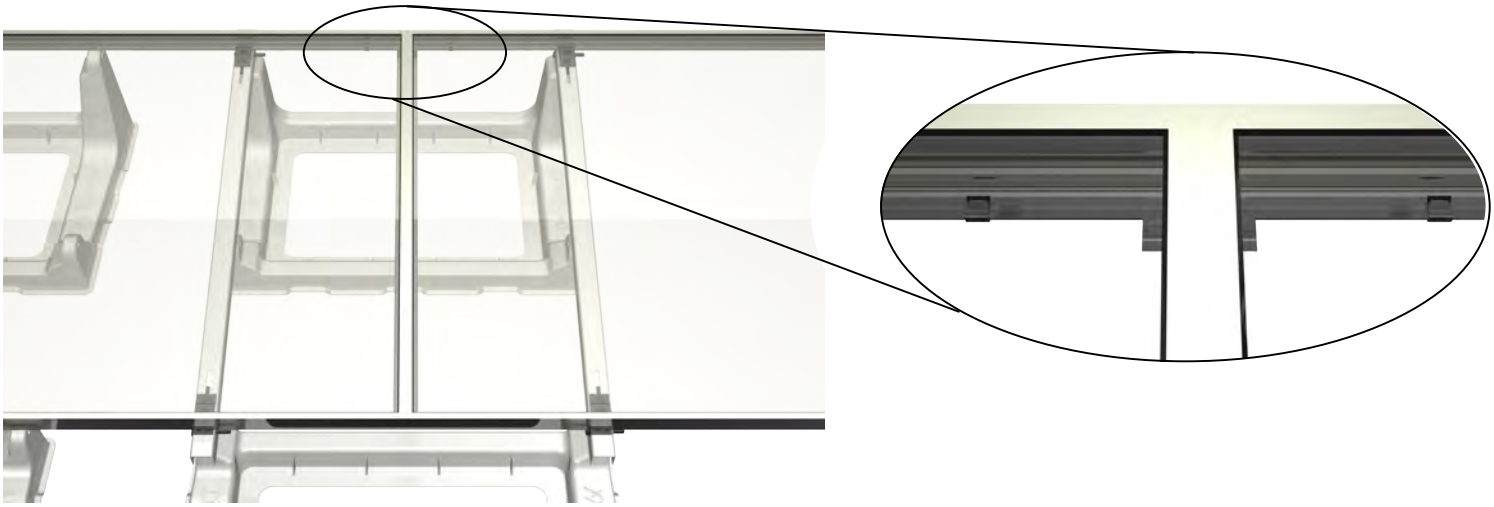
Flat Roof Installation:

Step 1: Begin by charting your installation. In this example, the system consists of 4 rows of 4 and 5 modules per row totaling 19 modules. In this instance, the homerun wires are exiting the system at the northeast corner of the array. The DynoBond will be installed to connect the modules west to east across each individual row. The DynoBond will also be connected on a row to row basis from North to South to bridge each row together. The DynoBond is used as a jumper between modules. The highlighted circles are the location of DynoBond Assemblies for this specific installation. The DynoBond can be installed while installing the modules or if space permits after the module installation is completed.

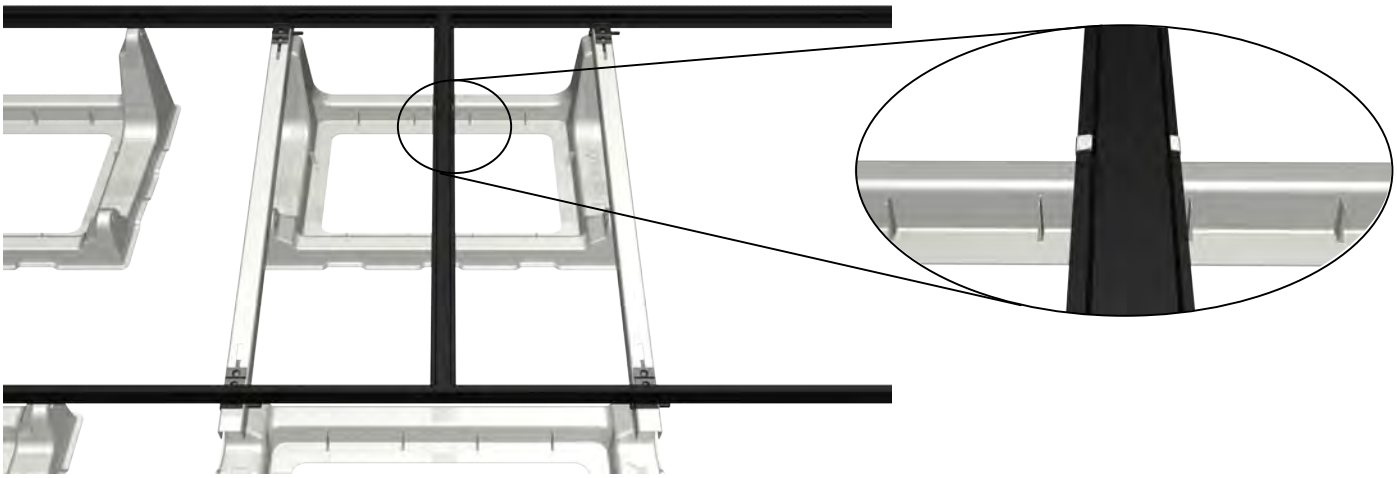


Step 2: Locate the DynoBond between your first set of modules. The DynoBond penetrates the anodization of the modules' frames; bonding them together. The DynoBond is used as a jumper between modules acting as a bridge for the equipment ground path. The connection points can be made along either the short or long sides of the panels granted the frame is the same on all four sides of the module.

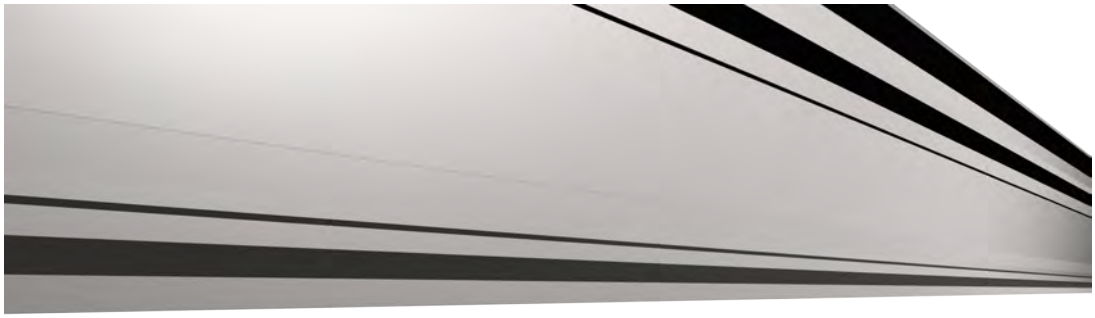
A. Long Side of Module

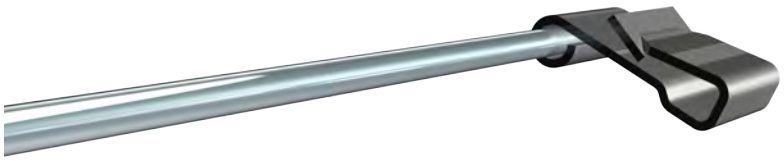


B. Short Side of Module

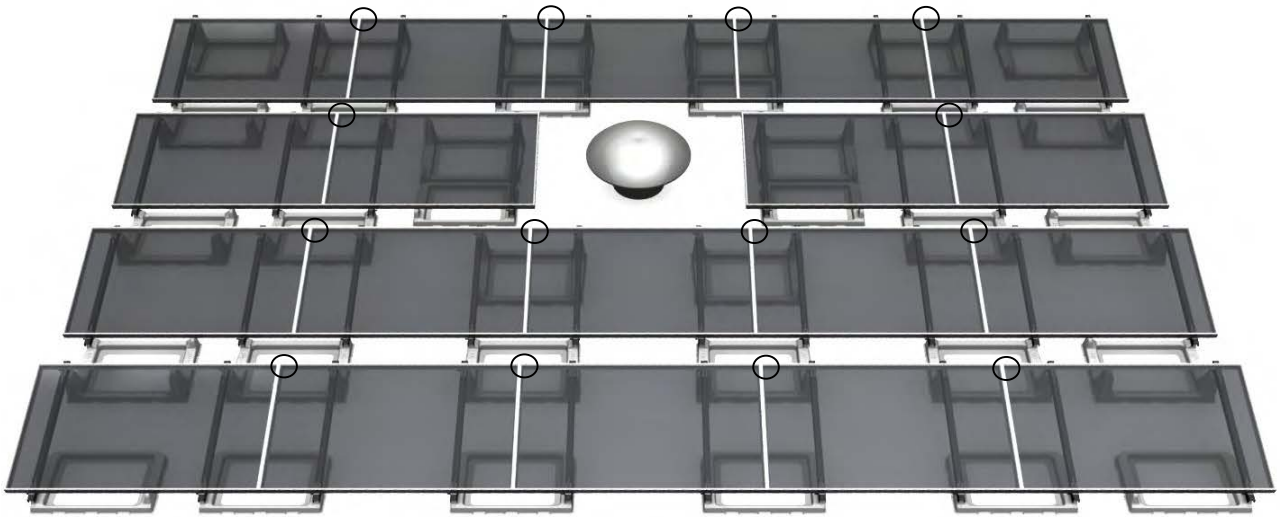


Step 3: Position the DynoBond on the bottom lip flange of the first module. To engage the module frame fit the module's bottom lip flange between the toothed section of the stainless steel spring clamp. Next, fit the adjacent module with the remaining free end of the DynoBond. Leave slack in wire for expansion and contraction of module frame.

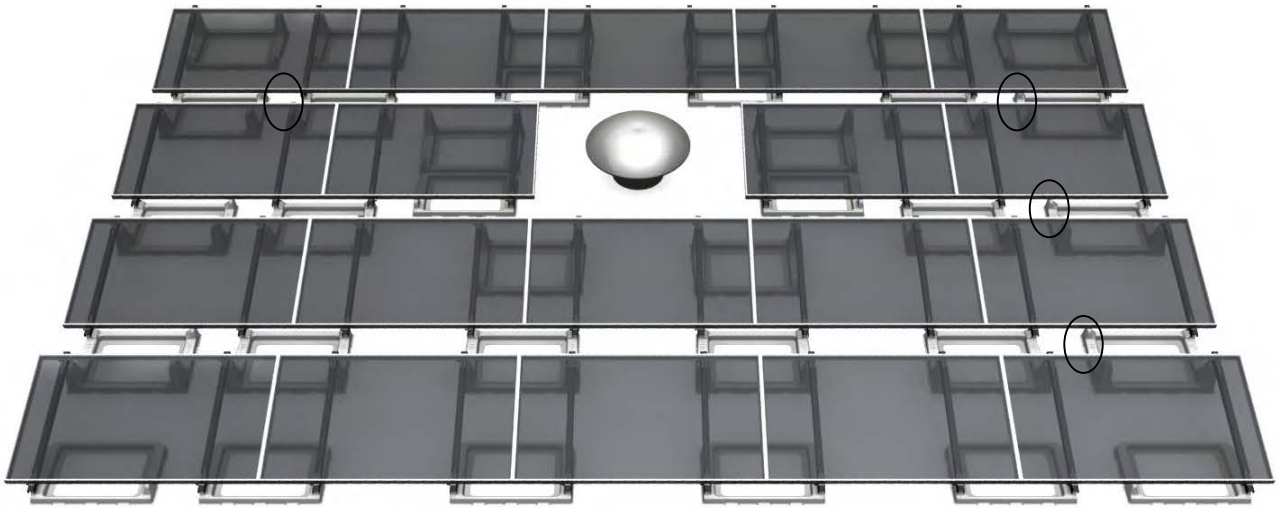




Step 4: Continue connections between modules across each individual row. This is shown in the below diagram circled in black.

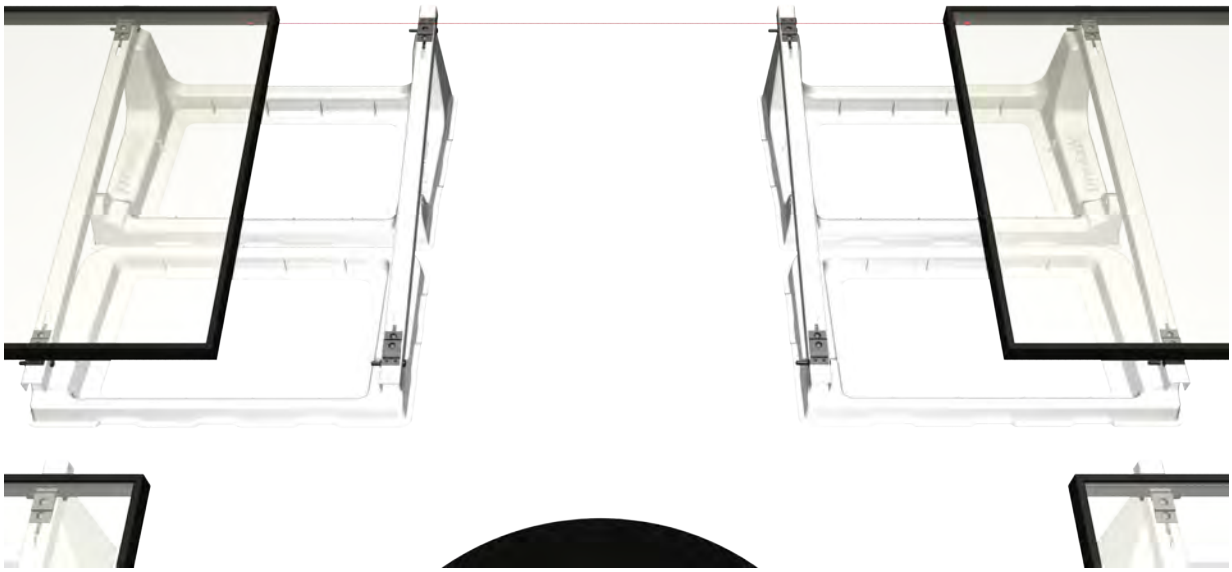


Step 5: The DynoBond is a versatile solution able to follow the array layout on any installation. After the modules have been bridged across the row it is time to connect each row together. One DynoBond is needed to connect one row to the next. The connection does not need to be in a straight column. It can be staggered following the contours of the installation. The only requirement is that all sections of an array are interconnected together by at least one point. Please see diagram below for an example of staggered inter row bridging. Connection points are highlighted with black circles.



Step 5 (continued)

Step 6: The homerun equipment ground wire can be landed via a grounding lug attached to a grounding point of a module anywhere throughout the array. Please keep in mind if a panel is removed within the array at any point for maintenance or service a DynoBond should be placed to maintain ground continuity. Highlighted in red for clarity.



Terms & Conditions

These General Terms and Conditions of Sale set forth hereafter ("Terms and Conditions") apply to all orders placed by Customer with Dynobond, Inc. of 6500 Sheridan Drive, Suite 100, Buffalo, NY 14221 (hereinafter, "Dynobond" or "We") for all products and related services including engineering services complementary to the purchase of product. The Terms and Conditions are effective as of the date of the invoice, engineer report, estimate or sales order confirmation to which it is attached ("Effective Date"), and apply to any sales on or after this date, until superseded by a new version of these Terms and Conditions.

The parties agree to be bound as follows:

1. **Sales Subject to Terms and Conditions.** All sales of Dynobond brand products and related accessories sold by Dynobond as well as accompanying services are by and between you, the buyer (hereinafter "Customer" or "You") and Dynobond, and are subject to these Terms and Conditions. Dynobond reserves the right to make changes to these Terms and Conditions which shall apply to all sales from and after the Effective Date of such revised Terms and Conditions.

2. **Products and Pricing May Change.** Dynobond reserves the right to make changes to its products and pricing in any Estimate with ninety (90) days written notice.

3. **Verification by Engineer.** Dynobond may provide to customer an engineer's report ("Report"), and/or sales and services estimate ("Estimates"). The data provided in Reports or Estimates is preliminary and provided to assist a licensed, professional engineer in its data calculations. The customer represents and warrants that it has hired or has had an opportunity to hire a licensed, professional engineer to review any Reports or Estimates and determine whether the proposed project specifications meet all appropriate professional standards, federal, state and local requirements and codes. Any damages, costs, delays, product failure or poor product performance due to error by the professional engineer shall be the responsibility of the customer.

4. **Customer Responsible for Accuracy.** Dynobond's Reports or Estimates are based upon information provided by Customer including building dimensions, location, size of system, brand of panels, number of panels etc. The information provided in the Engineer's report, price estimate and/or project specification is based in part on (1) information provided to Dynobond by Customer or (2) information obtained from third party sources including satellite images solar, weather and wind conditions. Customer represents and warrants to Dynobond that it either has reviewed (or has had opportunity to review) all information in Reports or Estimates provided by Customer or obtained from Third Parties and verifies its accuracy in entirety. Customer shall responsible for any damages or cost changes resulting from any breach of the warranties in this section including damages or costs resulting from erroneous information about the system, the job site, installation conditions, code requirements or installation environment shall void the warranty and Customer shall bear full responsibility for such damages and additional cost.

5. **Cost of Initial Engineering Report.** Dynobond may provide an initial Engineering Report at its own expense but is not legally bound to do so. Dynobond reserves the right to charge for the Initial Engineering Report provided that Dynobond provided that Dynobond and customer agree in writing to the cost of the Initial Engineering Report and the fee is based upon an hourly labor cost of $100.00 per hour for Engineering time only.

6. **Change Fees.** Furthermore, Dynobond reserves the right at its sole discretion to charge a change fee based upon an hourly engineering rate of $100.00 per hour for more than one revision requested by the customer to the price estimate or product specification. Furthermore, any revisions to the specification or changes in customer provided information will cancel the existing price estimate and necessitate a revised price estimate and revised timeline for product delivery and/or installation. Estimates of change fees for additional revisions can be requested in advance.

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