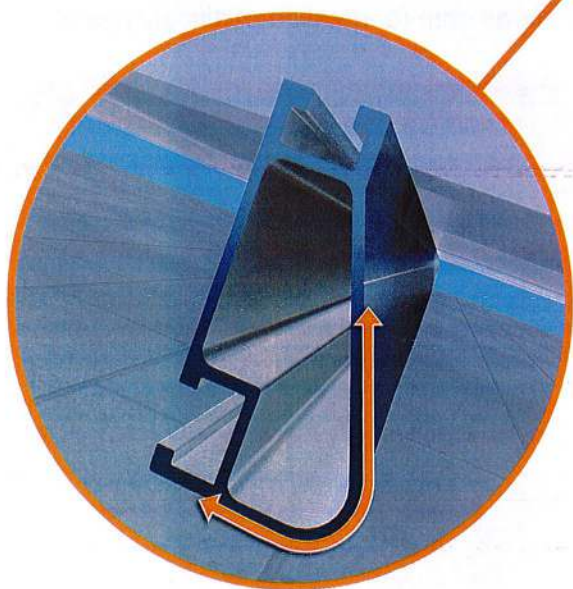
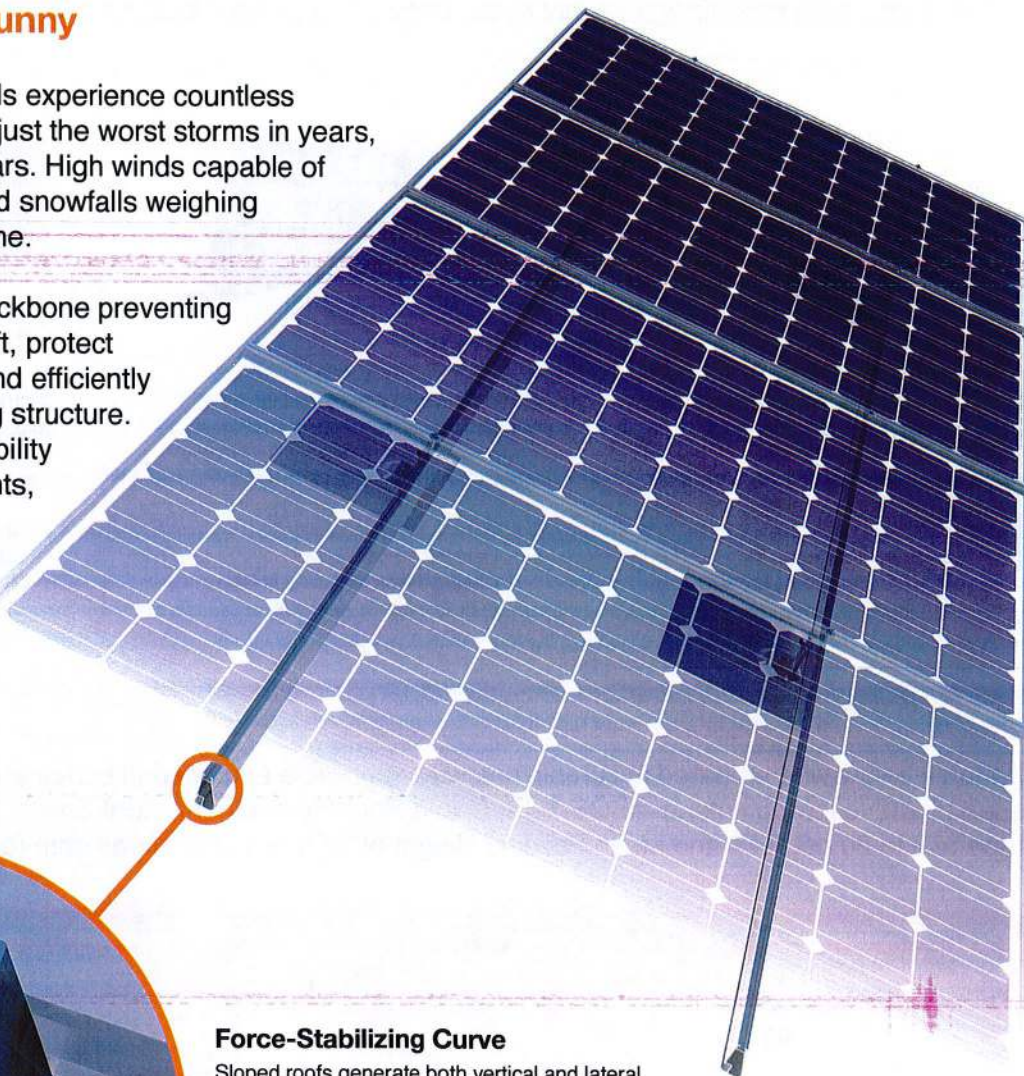


Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs



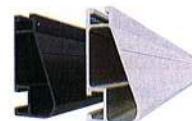
XR Rails are compatible with FlashFoot and other pitched roof attachments.



IronRidge offers a range of tilt leg options for flat roof mounting applications.

Corrosion-Resistant Materials

All XR Rails are made of 6000-series aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.



XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.



XR10

XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves spans up to 6 feet, while remaining light and economical.

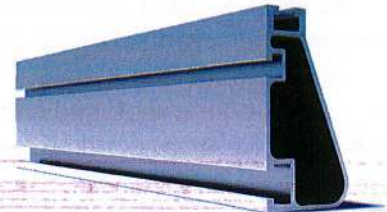
- 6' spanning capability
- Moderate load capability
- Clear & black anodized finish
- Internal splices available



XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 10 feet.

- 10' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans up to 12 feet for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

The table below was prepared in compliance with applicable engineering codes and standards.* Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2e, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed certification letters.

Load		Rail Span					
Snow (PSF)	Wind (MPH)	4'	5' 4"	6'	8'	10'	12'
None	90	XR10		XR100		XR1000	
	120						
	140						
	160						
20	90			XR100			
	120						
	140						
	160						
30	90			XR100			
	160						
40	90			XR100			
	160						
80	160						
120	160						

*Table is meant to be a simplified span chart for conveying general rail capabilities. Use approved certification letters for actual design guidance.

Attn: Corey Geiger, COO, IronRidge Inc.

Date: July 1st, 2021

Re: Structural Certification and Span Tables for the IronRidge Flush Mount System

This letter addresses the structural performance and code compliance of IronRidge's Flush Mount System. The contents of the letter shall be read in its entirety before applying to any project design. The Flush Mount System is a proprietary rooftop mounting system used to support photovoltaic (PV) modules installed in portrait or landscape orientation and set parallel to the underlying roof surface. PV modules are supported by extruded aluminum XR Rails and secured to the rails with IronRidge mounting clamps. The XR Rails are side mounted to a selected roof attachment with 3/8" stainless steel bonding hardware and then attached directly to the roof structure or to a stanchion that is fastened to the underlying roof structure. Assembly details of a typical Flush Mount installation and its core components are shown in Exhibit EX-0015.

The IronRidge Flush Mount System is designed and certified to the structural requirements of the reference standards listed below, for the load conditions and configurations tabulated in the attached span tables.

- ASCE/SEI 7-16 Minimum Design Loads for Buildings and Other Structures (ASCE 7-16)
- 2018 International Building Code (IBC-2018)
- 2020 Florida Building Code (FBC-2020)
- 2015 Aluminum Design Manual (ADM-2015)
- Report SEAOC (Structural Engineer Association of California) PV2-2017 Wind Design for Solar Arrays

The tables included in this letter provide the maximum allowable spans of XR Rails in the Flush Mount System for the respective loads and configurations listed, covering wind exposure categories B, C, & D, roof zones provided in ASCE 7-16 for gable & hip roof profiles, and roof slopes of 8° to 45°. The tabulated spans are applicable when the following conditions are met:

1. *Span* is the distance between two adjacent roof attachment points (measured at the center of the attachment fastener).
2. Each module shall be supported by 2 rails (2 rail system) or 3 rails (3 rail system). Spans are calculated based on 2 rail systems, and conservatively deemed acceptable for 3 rail systems.
3. The underlying roof slope, measured between the roof surface and horizontal plane, is 8° to 45°.
4. The *mean roof height*, defined as the average of the roof eave height and the roof ridge height measured from grade, does not exceed 30 feet.
5. A clearance from the underside of the array to the roof surface of 2" minimum shall be provided and the height of the array, the distance from the module top surface to the roof surface (defined as h_2), shall not exceed 10".
6. Module length and area shall not exceed the maximum values listed on the respective span tables.
7. All Flush Mount components shall be installed in a professional workmanlike manner per IronRidge's *Flush Mount Installation Manual* and other applicable standards for the general roof construction practice.

The parameters and adjustments allowed in the span tables are defined as the following:

1. The Flush Mount System is designed as a Risk Category II structure as defined by ASCE 7-16 Table 1.5-1.
2. Wind speed shall conform to ASCE 7-16 Fig. 26.5-1B (for Risk Category II) and applicable state & local county/city amendments to the IBC. No special wind topographic features are included and both topographic coefficient (K_{zt}) and wind ground elevation factor (K_e) are taken as 1.0.
3. Snow load used in the span tables is the *ground snow* and shall conform to ASCE 7-16 Fig. 7.2-1 and applicable state & local county/city amendments to the IBC. If the local jurisdiction specified snow load is in the format of a *flat roof snow*, it shall first be converted to a *ground snow* following the local building code/ amendments before the application of the attached span tables. No special snow conditions are considered including unbalanced, drifting, sliding, retention, or ponding snow. No rain-on-snow surcharge load is considered. The span tables do not apply to buildings which are intentionally kept below freezing, kept just above freezing, or unheated.
4. The span tables reflect the ASCE 7 prescribed earthquake loads with the maximum magnitudes being:
 - (a) For ground snow no greater than 42psf: $S_s \leq 2.0g$ for Site Class A, B, C, & D.
 - (b) For ground snow greater than 65psf: $S_s \leq 1.0g$ for Site Class A, B, C, & D.
 - (c) For ground snow between 42 and 65psf: $S_s \leq 1.5g$ for Site Class A, B, C, & D.
5. Roof zones are defined by ASCE 7-16 Figure 30.3-2A to Figure 30.3-2I and are organized into three *groups* in which the zones share the same External Pressure Coefficients (GC_p). Roof zones comprising each *group* along with each roof zone's size and location are depicted in Figures 2 and 3 below each span table.
6. The maximum rail cantilever length, measured from the rail end to the nearest attachment point, shall be the lesser of the following two conditions: 40% of the allowable span provided for the respective load & configuration condition from the span tables, or 36".
7. Allowable span length in the charts may be multiplied by a factor of 1.08 if the rails are continuous over a minimum of three spans.
8. No splices are allowed in the rail cantilever. For each XR splice type install per the following requirements:
 - a) XR Bonded Splice cannot be installed in the center 1/3 of interior spans, or the outer 2/3 of end spans.
 - b) BOSS Splice can be installed at any location within a span.
9. Shaded cells of the span tables indicate conditions in which UFO Mid Clamp connection capacity is exceeded. If such conditions are encountered contact support@ironridge.com.

10. Systems using CAMO module clamps shall be installed with the following guidance:

- a) For single module installations (orphan modules) using modules with a length greater than 67.5", CAMO clamps shall not be installed in regions that experience ground snow loads of 70psf and greater. Such scenarios are shown by asterisks in the applicable span tables.
- b) CAMO will function within a module's design load ratings. Be sure the specific module being used with CAMO meets the dimensional requirements shown in the figure below and that the module selected is suitable for the environmental conditions of a particular project.

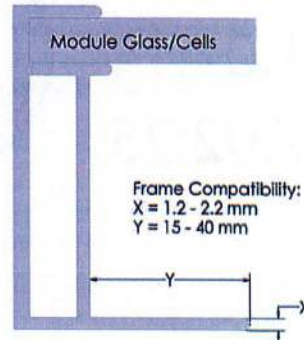


Figure 1: CAMO Module Frame Dimensional Requirements

Span values for *Exposed* and *Edge* module conditions, as defined below, are included in the attached span tables and shall be used when each condition exists. The maximum allowable span for *Exposed* or *Edge* modules shall be the lesser of the following two: (1) The span value for the *Exposed* or *Edge* module condition; (2) The span value determined by site wind speed and ground snow load. Additionally, irrespective of the lesser span, the shaded cells for the *Exposed* and *Edge* module conditions which reflect the UFO clamp usage limitation detailed in note 9 of page 2 shall apply to the respective condition.

1. Exposed Module conditions:

A module is defined as *Exposed* (per Section 29.4.4 of ASCE 7-16) if the distance from any of its free edges (an edge with no connectivity to other modules) to its facing roof edge (such as eave, ridge, rake, or hip) is greater than $0.5h$ (h is ASCE defined building height) AND if the distance from its free edge to any other adjacent array or panel is greater than 4 feet.

The allowable spans and cantilever shall only be applied to the portion of rail directly under *Exposed* Modules.

2. Edge Module conditions:

A module is defined as an *Edge Module* when its distance from any side of the module to its facing perimeter roof edge (such as eave, ridge, rake, or hip) is less than 2 times the height of the array ($2h_2$) where h_2 is measured from the roof surface to the top surface of the module.

The allowable spans and cantilever shall only be applied to the portion of rail directly under *Edge* Modules. Additionally, if the roof edge is the eave or ridge, only the rail nearest to that roof edge shall be considered for this span adjustment.



28357 Industrial Blvd.
Hayward, CA 94545
1-800-227-9523
IronRidge.com

The span tables provided in this letter are certified based on the structural performance of IronRidge XR Rails only with no consideration of the structural adequacy of the chosen roof attachments, PV modules, or the underlying roof supporting members. It is the responsibility of the installer or system designer to verify the structural capacity and adequacy of the aforementioned system components in regards to the applied or resultant loads of any chosen array configuration.

Sincerely,

Gang Xuan
2021.07.14
'00'07- 17:02:25



This item has been electronically signed and sealed by *Gang Xuan* using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Gang Xuan, PE
Senior Structural Engineer

[illegible]

Gable Roof Flush Mount System Span Table (inches) - Portrait or Landscape Installation
Max Module Length: 67.5" Max Module SF: 21 SF

Max Module Length: 67.5", Max Module Sf: 21 Sf

Exposure B

Grouping of ASCE 7-16 Roof Zones (Gable)

Roof Slope	8° - 27°			28° - 45°		
Group	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3
ASCE 7-16 Roof Zones	1 2e 3e	2n 2r 3e	3r	1 2r	2n 3r	3e

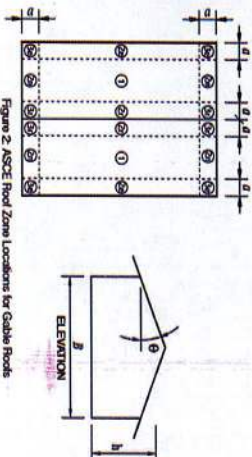


Figure 2. ASCE Roof Zone Locations for Gable Roofs

Notation (Per ASCE 7-16)

a = 10% of least horizontal dimension or 0.4h, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 ft (0.9 m). If an overhang exists, the edge distance shall be measured from the outside edge of the overhang. The horizontal dimensions used to compute the edge distance shall not include any overhang distances.

B = Horizontal dimension of building measured normal to wind direction, in ft (m).

h = Mean roof height, in ft (m).

θ = Angle of plane of roof from horizontal, in degrees.

Exposure B

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Notation (Per ASCE 7-16)
 a = 10% of least horizontal dimension or 0.4h, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 ft (0.9



θ = Angle of plane of roof from horizontal, in degrees

h = Mean roof height, in ft (m)

B = Horizontal dimension of building measured normal to wind

••Max Module length: 86" , Max Module SF: 24.5 SF
Exposure B

* Shaded cells indicate conditions in which UFO Mid Clamp connection capacity is exceeded. See Note 9 on page 2 for details.

Grouping of ASCE 7-16 Roof Zones (Gable)					
Roof Slope	8° - 27°			28° - 45°	
ASCE 7-16 Roof Zones	Group 1 1 2e	Group 2 2n 2r 3e	Group 3 3r	Group 1 1 2e 2r	Group 2 2n 3r 3e



θ = Angle of plane of roof from horizontal, in degrees

¹ Sarah E. Stenabaugh 2015 *Design Wind Loads for Solar Modules Mounted Parallel to the Roof of a Low-rise Building*, University of Western Ontario, Ph.D Program Dissertation.

¹ Sarah E. Stenabaugh 2015 *Design Wind Loads for Solar Modules Mounted Parallel to the Roof of a Low-rise Building*, University of Western Ontario, Ph.D Program Dissertation.

Gable Roof Flush Mount System Span Table (inches) - Portrait of Landscape Installation
 **Max Module Length: 92.5'; Max Module SF: 29.5 SF

Wind Speed (mph)		Roof Slope (deg)		Ground Snow (psf)		10 psf		20 psf		30 psf		40 psf		50 psf		60 psf		70 psf		80 psf		90 psf		100 psf		110 psf		120 psf		Exposed Mod.	Edge Mod.		
Wind Speed (mph)	Roof Slope (deg)	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10	Group 11	Group 12	Group 13	Group 14	Group 15	Group 16	Group 17	Group 18	Group 19	Group 20	Group 21	Group 22	Group 23	Group 24	Group 25	Group 26	Group 27	Group 28	Group 29	Group 30		
90	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	96	101	81
90	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	105	100	83
95	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	83
95	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	102	83
100	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	83
100	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
105	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
105	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
110	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
110	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
115	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
115	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
120	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
120	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
130	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
130	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
140	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
140	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
150	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
150	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
160	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
160	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
170	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
170	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
175	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
175	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
180	8-20	112	112	112	96	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	110	102	99	86
180	21-27	110	110	110	93	93	93	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	107	105	86
180	28-45	107	107	107	92	92	92	79	79	79	78	78	72	72	66	66	64	59	59	55	55	52	52	49	49	48	48	44	44	110	102	99	86

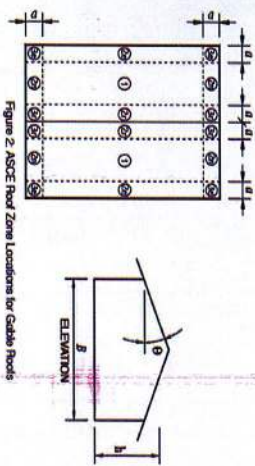
Wind Speed (mph) Roof Slope (deg) Group 1 Group 2 Group 3 Group 4 Group 5 Group 6 Group 7 Group 8 Group 9 Group 10 Group 11 Group 12 Group 13 Group 14 Group 15 Group 16 Group 17 Group 18 Group 19 Group 20 Group 21 Group 22 Group 23 Group 24 Group 25 Group 26 Group 27 Group 28 Group 29 Group 30

** More additional installation requirements for CAMO module clamp. See Note 10 on Page 3 for details.

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Grouping of ASCE 7-16 Roof Zones (Gable)

Roof Slope	8° - 27°			28° - 45°		
Group	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3
ASCE 7-16 Roof Zones	1	2n 2r 3e	3r	1 2e 2r	2n 3r	3e

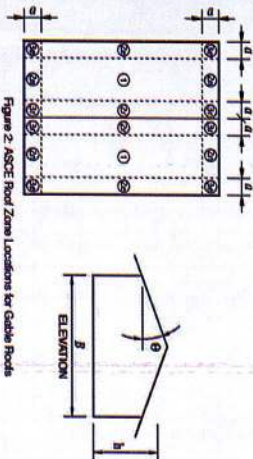


Notation (Per ASCE 7-16)
 a = 10% of least horizontal dimension or 0.4h, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 ft (0.9 m). If an overhang exists, the edge distance shall be measured from the outside edge of the overhang. The horizontal dimensions used to compute the edge distance shall not include any overhang distances.
 B = Horizontal dimension of building measured normal to wind direction, in ft (m).
 h = Mean roof height, in ft (m).
 θ = Angle of plane of roof from horizontal, in degrees.

Rail: Gable Roof Flush Mount System Span Table (Inches) - Portrait or Landscape Installation
 **Max Module Length: 92.5" Max Module SF: 29.5 SF

XR100		Exposure C												Exposure Mod.												Edge Mod.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Wind Speed (mph)	Roof Slope (deg)	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
8-20	112	112	101	96	96	79	79	77	77	72	72	64	64	58	58	54	54	51	51	48	48	48	48	44	44	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42

Roof Slope		8° - 27°			28° - 45°		
Group	Roof Slope	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3
ASCE 7-16 Roof Zones		1	2a	3e	1	2a	3e



Notation (Per ASCE 7-16)
 a = 10% of least horizontal dimension or 0.4h, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 ft (0.9 m). If an overhang exists, the edge distance shall be measured from the outside edge of the overhang. The horizontal dimensions used to compute the edge distance shall not include any overhang distances.
 B = Horizontal dimension of building measured normal to wind direction, in ft (m).
 h = Mean roof height, in ft (m).
 θ = Angle of plane of roof from horizontal, in degrees.

Wind pressure loads used to generate the span tables for modules with maximum lengths of 86" and 92.5" are based on the wind tunnel study "Design Wind Loads for Solar Modules Mounted Parallel to the Roof of a Low-rise Building", referenced in ASCE 7-16 Section 29.4.4.

1. Sarah E. Stenabaugh 2015 Design Wind Loads for Solar Modules Mounted Parallel to the Roof of a Low-rise Building, University of Western Ontario, Ph.D Program Dissertation.

Rail:

Hip Roof Flush Mount System Span Table (Inches) - Portrait or Landscape Installation
Max Module Length: 67.5", Max Module SF: 21 SF

Max Module Length: 67.5", Max module sr: 41 sr

Exposure B

[illegible]

Grouping of ASCE 7-16 Roof Zones (Hip)

Roof Slope	8° - 20°			21° - 27°			28° - 45°		
Group	1	2	3	1	2	3	1	2	3
ASCE 7-16 Roof Zones	1	2r	2e 3	1	2e 2r	3	1	2e	2r 3

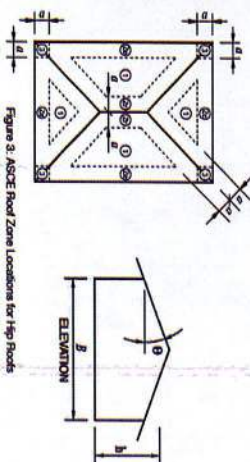


Figure 3: ASCE Roof Zone Locations for 1-Hip Roofs

Notation (Per ASCE 7-16)

a = 10% of least horizontal dimension or 0.4h, whichever is smaller but not less than either 4% of least horizontal dimension or 3 ft (0.9 m). If an overhang exists, the edge distance shall be measured from the outside edge of the overhang. The horizontal dimensions used to compute the edge distance shall not include any overhang distances.

B = Horizontal dimension of building measured normal to wind direction, in ft (m).

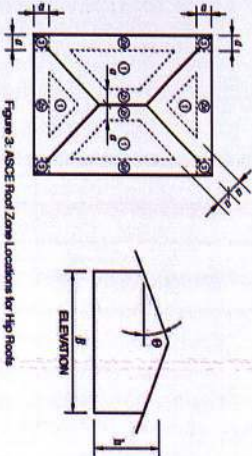
θ = Angle of plane of roof from horizontal, in degrees

Hip Roof Flush Mount System Span Table (Inches) - Portrait or Landscape Installation
Max Module Length: 80". Max Module SF: 24 SF

XR100		Ground Snow: 0 psl		10 psl		20 psl		30 psl		40 psl		50 psl		60 psl		70 psl		80 psl		90 psl		100 psl		110 psl		120 psl		Exposed Mod.		Edge Mod.																		
Wind Speed (mph)	Roof Slope (deg)	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3																	
90	8-20	123	123	123	102	102	102	86	86	86	84	84	84	75	75	75	68	68	68	64	64	64	58	58	58	55	55	55	52	52	49	49	48	48	45	45	123	123	123	108	96	91						
90	12-17	121	121	121	89	89	89	84	84	84	83	83	83	76	76	76	69	69	69	64	64	64	59	59	59	56	56	56	53	53	50	50	49	49	48	48	46	46	121	121	121	110	104	104				
90	16-13	119	119	119	98	98	98	93	93	93	92	92	92	85	85	85	78	78	78	72	72	72	67	67	67	64	64	64	61	61	58	58	57	57	56	56	54	54	119	119	119	109	103	97				
95	8-20	123	123	123	102	102	102	86	86	86	84	84	84	75	75	75	68	68	68	64	64	64	58	58	58	55	55	55	52	52	49	49	48	48	45	45	123	123	123	110	104	104						
95	12-17	121	121	121	89	89	89	84	84	84	83	83	83	76	76	76	69	69	69	64	64	64	59	59	59	56	56	56	53	53	50	50	49	49	48	48	46	46	121	121	121	110	104	104				
95	16-13	119	119	119	98	98	98	93	93	93	92	92	92	85	85	85	78	78	78	72	72	72	67	67	67	64	64	64	61	61	58	58	57	57	56	56	54	54	119	119	119	109	103	97				
100	8-20	123	123	123	102	102	102	86	86	86	84	84	84	75	75	75	68	68	68	64	64	64	58	58	58	55	55	55	52	52	49	49	48	48	45	45	123	123	123	110	104	104						
100	12-17	121	121	121	89	89	89	84	84	84	83	83	83	76	76	76	69	69	69	64	64	64	59	59	59	56	56	56	53	53	50	50	49	49	48	48	46	46	121	121	121	110	104	104				
100	16-13	119	119	119	98	98	98	93	93	93	92	92	92	85	85	85	78	78	78	72	72	72	67	67	67	64	64	64	61	61	58	58	57	57	56	56	54	54	119	119	119	109	103	97				
105	8-20	123	123	123	102	102	102	86	86	86	84	84	84	75	75	75	68	68	68	64	64	64	58	58	58	55	55	55	52	52	49	49	48	48	45	45	123	123	123	110	104	104						
105	12-17	121	121	121	89	89	89	84	84	84	83	83	83	76	76	76	69	69	69	64	64	64	59	59	59	56	56	56	53	53	50	50	49	49	48	48	46	46	121	121	121	110	104	104				
105	16-13	119	119	119	98	98	98	93	93	93	92	92	92	85	85	85	78	78	78	72	72	72	67	67	67	64	64	64	61	61	58	58	57	57	56	56	54	54	119	119	119	109	103	97				
110	8-20	123	123	123	102	102	102	86	86	86	84	84	84	75	75	75	68	68	68	64	64	64	58	58	58	55	55	55	52	52	49	49	48	48	45	45	123	123	123	110	104	104						
110	12-17	121	121	121	89	89	89	84	84	84	83	83	83	76	76	76	69	69	69	64	64	64	59	59	59	56	56	56	53	53	50	50	49	49	48	48	46	46	121	121	121	110	104	104				
110	16-13	119	119	119	98	98	98	93	93	93	92	92	92	85	85	85	78	78	78	72	72	72	67	67	67	64	64	64	61	61	58	58	57	57	56	56	54	54	119	119	119	109	103	97				
115	8-20	123	123	123	102	102	102	86	86	86	84	84	84	75	75	75	68	68	68	64	64	64	58	58	58	55	55	55	52	52	49	49	48	48	45	45	123	123	123	110	104	104						
115	12-17	121	121	121	89	89	89	84	84	84	83	83	83	76	76	76	69	69	69	64	64	64	59	59	59	56	56	56	53	53	50	50	49	49	48	48	46	46	121	121	121	110	104	104				
115	16-13	119	119	119	98	98	98	93	93	93	92	92	92	85	85	85	78	78	78	72	72	72	67	67	67	64	64	64	61	61	58	58	57	57	56	56	54	54	119	119	119	109	103	97				
120	8-20	123	123	123	102	102	102	86	86	86	84	84	84	75	75	75	68	68	68	64	64	64	58	58	58	55	55	55	52	52	49	49	48	48	45	45	123	123	123	110	104	104						
120	12-17	121	121	121	89	89	89	84	84	84	83	83	83	76	76	76	69	69	69	64	64	64	59	59	59	56	56	56	53	53	50	50	49	49	48	48	46	46	121	121	121	110	104	104				
120	16-13	119	119	119	98	98	98	93	93	93	92	92	92	85	85	85	78	78	78	72	72	72	67	67	67	64	64	64	61	61	58	58	57	57	56	56	54	54	119	119	119	109	103	97				
130	8-20	120	120	120	99	99	99	86	86	86	84	84	84	75	75	75	68	68	68	64	64	64	58	58	58	55	55	55	52	52	49	49	48	48	47	47	46	46	120	120	120	107	101	95				
130	12-17	117	117	117	106	106	106	93	93	93	91	91	91	82	82	82	75	75	75	70	70	70	65	65	65	62	62	62	59	59	56	56	53	53	51	51	50	50	49	49	47	47	117	117	117	106	100	94
130	16-13	115	115	115	104	104	104	91	91	91	89	89	89	80	80	80	73	73	73	67	67	67	62	62	62	59	59	59	56	56	53	53	50	50	49	49	48	48	46	46	115	115	115	104	98	92		
140	8-20	109	109	109	96	96	96	83	83	83	81	81	81	72	72	72	65	65	65	60	60	60	55	55	55	52	52	52	49	49	46	46	43	43	42	42	41	41	40	40	109	109	109	96	90	84		
140	12-17	106	106	106	93	93	93	80	80	80	78	78	78	69	69	69	62	62	62	57	57	57	52	52	52	49	49	49	46	46	43	43	40	40	39	39	38	38	37	37	106	106	106	93	87	81		
140	16-13	102	102	102	89	89	89	76	76	76	74	74	74	65	65	65	58	58	58	53	53	53	48	48	48	45	45	45	42	42	39	39	36	36	35	35	34	34	33	33	102	102	102	89	83	77		
150	8-20	99	99	99	86	86	86	73	73	73	71	71	71	62	62	62	55	55	55	50	50	50	45	45	45	42	42	42	39	39	36	36	33	33	32	32	31	31	30	30	99	99	99	86	80	74		
150	12-17	96	96	96	83	83	83	70	70	70	68	68	68	59	59	59	52	52	52	47	47	47	42	42	42	39	39	39	36	36	33	33	30	30	29	29	28	28	27	27	96	96	96	83	77	71		
150	16-13	92	92	92	79	79	79	66	66	66	64	64	64	55	55	55	48	48	48	43	43	43	38	38	38	35	35	35	32	32	29	29	26	26	25	25	24	24	23	23	92	92	92	79	73	67		
160	8-20	84	84	84	71	71	71	58	58	58	56	56	56	47	47	47	40	40	40	35	35	35	30	30	30	27	27	27	24	24	21	21	18	18	17	17	16	16	15	15	84	84	84	71	65	59		
160	12-17	81	81	81	68	68	68	55	55	55	53	53	53	44	44	44	37	37	37	32	32	32	27	27	27	24	24	24	21	21	18	18	15	15	14	14	13	13	12	12	81	81	81	68	62	56		
160	16-13	77	77	77	64	64	64	51																																								

Grouping of ASCE 7-16 Roof Zones (Hip)

Roof Slope	6° - 20°			21° - 27°			28° - 45°		
Group	1	2	3	1	2	3	1	2	3
ASCE 7-16 Roof Zones	1	2x	3	1	2x	3	1	2x	3



Notation (Per ASCE 7-16)

a = 10% of least horizontal dimension or 0.4h, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 ft (0.9 m). If an overhang exists, the edge distance shall be measured from the outside edge of the overhang. The horizontal dimensions used to compute the edge distance shall not include any overhang distances.

B = Horizontal dimension of building measured normal to wind direction, in ft (m).

h = Mean roof height, in ft (m).

θ = Angle of plane of roof from horizontal, in degrees.

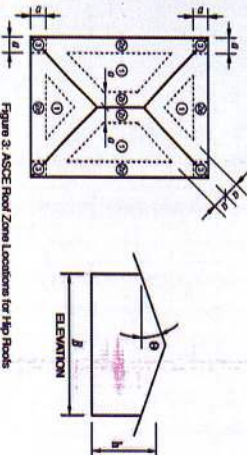
<

Hip Roof Flush Mount System Span Table (Inches) - Portrait or Landscape Installation

••Max Module Length: 86", Max Module SF: 24,5 SF

Grouping of ASCE 7-16 Roof Zones (Hip)

Roof Slope	8° - 20°			21° - 27°			28° - 45°		
Group	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3
ASSE 7-16 Roof Zones	1	2r	2e 3	1	2e 2r	3	1	2e	2r 3



Notation (Per ASCE 7-16)

a = 10% of least horizontal dimension or 0.4h, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 ft (0.9 m). If an overhang exists, the edge distance shall be measured from the outside edge of the overhang. The horizontal dimensions used to compute the edge distance shall not include any overhang distances.

B = Horizontal dimension of building measured normal to wind direction, in ft (m).

h = Mean roof height, in ft (m).

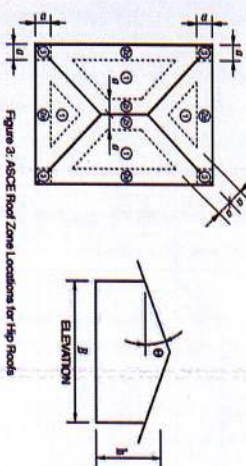
θ = Angle of plane of roof from horizontal, in degrees.

***Wind pressure loads used to generate the span tables for modules with maximum lengths of 86" and 92.5" are based on the wind tunnel study "Design Wind Loads for Solar Modules Mounted Parallel to the Roof of a Low-rise Building", referenced in ASCE 7-16 Section 29.4.4.

1. Sarah E. Stenabaugh 2015 *Design Wind Loads for Solar Modules Mounted Parallel to the Roof of a Low-rise Building*. University of Western Ontario, Ph.D Program Dissertation.

Rail:		Hip Roof Flush Mount System Span Table (Inches) - Front or Landscape Installation **Max Module Length: 85", Max Module SF: 24.5 SF																														
XR100		Exposure D																														
Wind Speed (mph)	Roof Slope (deg)	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	100 psf	110 psf	120 psf	Exposed Mod.	Edge Mod.																	
8-20	116	111	97	97	82	82	81	81	73	73	68	68	61	61	56	56	53	53	50	50	48	48	45	45	44	44	104	100	96	77	72	57
21-27	114	114	109	96	96	96	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	104	100	96	77	72	57
28-45	111	111	106	96	96	96	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	104	100	96	77	72	57
46-60	108	108	103	97	97	97	97	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	104	100	96	77	72	57
61-75	105	105	100	95	95	95	95	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	104	100	96	77	72	57
76-90	102	102	97	92	92	92	92	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	104	100	96	77	72	57
91-105	100	100	95	90	90	90	90	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	104	100	96	77	72	57
106-120	97	97	92	87	87	87	87	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	104	100	96	77	72	57
121-135	94	94	89	84	84	84	84	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	104	100	96	77	72	57
136-150	91	91	86	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	104	100	96	77	72	57
151-165	88	88	83	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	104	100	96	77	72	57
166-180	85	85	80	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	104	100	96	77	72	57
181-200	82	82	77	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	104	100	96	77	72	57
201-220	79	79	74	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	104	100	96	77	72	57
221-240	76	76	71	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	104	100	96	77	72	57
241-260	73	73	68	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	104	100	96	77	72	57
261-280	70	70	65	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	104	100	96	77	72	57
281-300	67	67	62	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	104	100	96	77	72	57
301-320	64	64	59	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	104	100	96	77	72	57
321-340	61	61	56	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	104	100	96	77	72	57
341-360	58	58	53	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	104	100	96	77	72	57
361-380	55	55	50	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	104	100	96	77	72	57
381-400	52	52	47	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	104	100	96	77	72	57
401-420	49	49	44	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	104	100	96	77	72	57
421-440	46	46	41	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	104	100	96	77	72	57
441-460	43	43	38	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	104	100	96	77	72	57
461-480	40	40	35	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	104	100	96	77	72	57
481-500	37	37	32	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	104	100	96	77	72	57
501-520	34	34	29	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	104	100	96	77	72	57
521-540	31	31	26	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	104	100	96	77	72	57
541-560	28	28	23	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	104	100	96	77	72	57
561-580	25	25	20	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	104	100	96	77	72	57
581-600	22	22	17	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	104	100	96	77	72	57
601-620	19	19	14	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	104	100	96	77	72	57
621-640	16	16	11	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	104	100	96	77	72	57
641-660	13	13	8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	104	100	96	77	72	57
661-680	10	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
681-700	7	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
701-720	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
721-740	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
741-760	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
761-780	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
781-800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
801-820	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
821-840	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
841-860	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
861-880	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
881-900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	100	96	77	72	57
901-920	0	0	0	0	0	0	0	0	0	0	0																					

Roof Slope		8° - 20°		21° - 27°		28° - 45°	
Group	1	2	3	1	2	3	1
ASCE 7-16 Roof Zones	1	2a	3	1	2a	3	1



Notation (Per ASCE 7-16)

a = 10% of least horizontal dimension or 0.4h, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 ft (0.9 m). If an overhang exists, the edge distance shall be measured from the outside edge of the overhang. The horizontal dimensions used to compute the edge distance shall not include any overhang distances.

B = Horizontal dimension of building measured normal to wind direction, in ft (m).

h = Mean roof height, in ft (m).

θ = Angle of plane of roof from horizontal, in degrees.

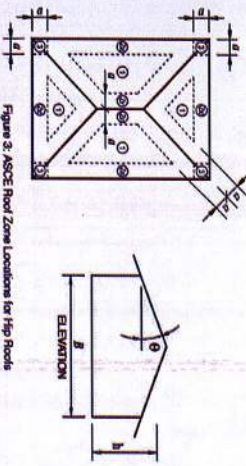
1. "Wind pressure loads used to generate the span tables for modules with maximum lengths of 86" and 92.5" are based on the wind tunnel study "Design Wind Loads for Solar Modules Mounted Parallel to the Roof of a Low-rise Building", referenced in ASCE 7-16 Section 29.4.4.

1. Sarah E. Stenabaugh 2015 Design Wind Loads for Solar Modules Mounted Parallel to the Roof of a Low-rise Building, University of Western Ontario, Ph.D Program Dissertation.

Rail:
XR100
Hip Roof Flush Mount System Span Table (Inches) - Portrait or Landscape Installation
Max Module Length: 92.5" Max Module SF: 29.5 SF
Exposure C

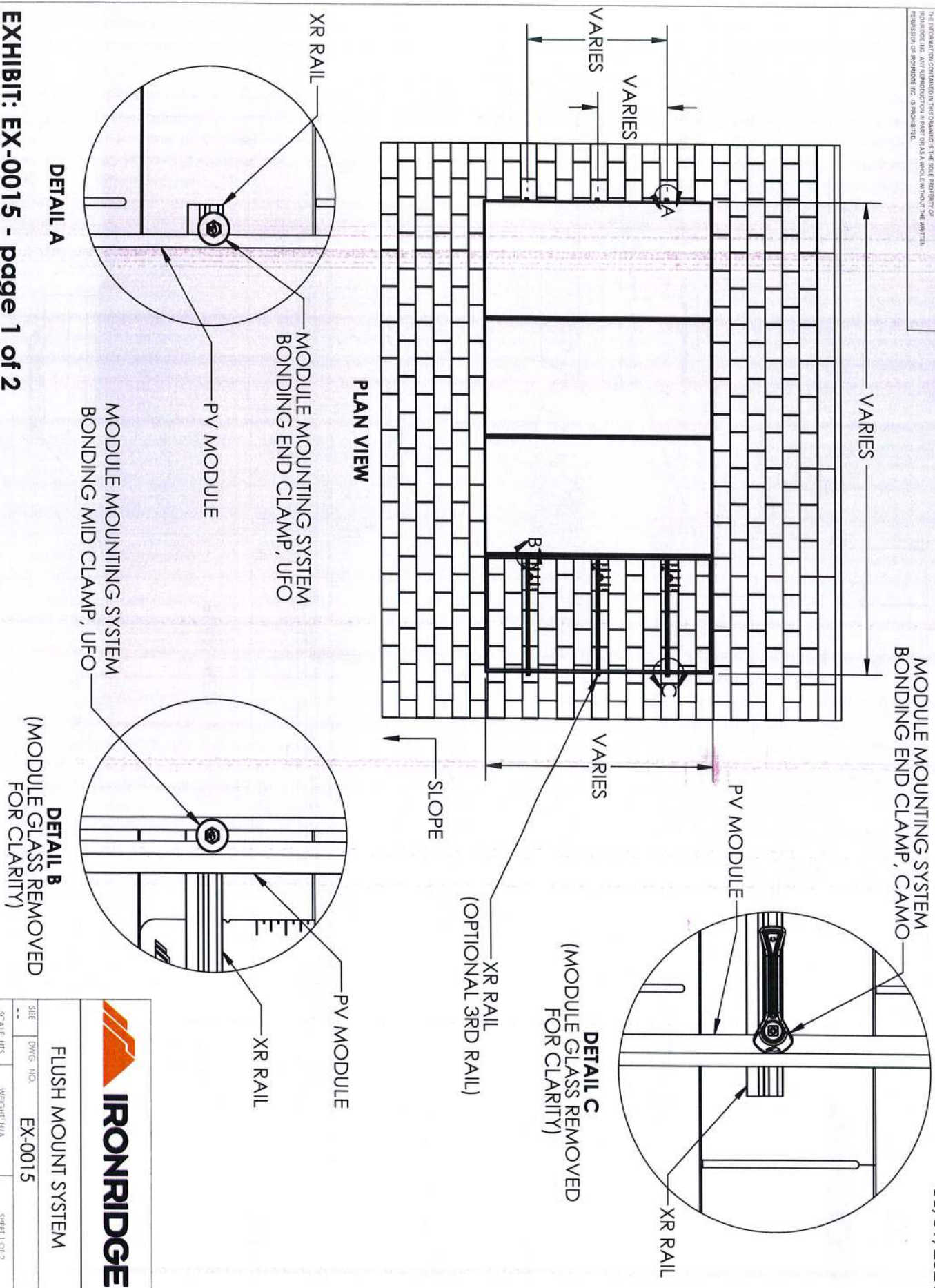
Wind Speed (mph)	Roof Slope (deg.)	Ground Snow (0 psf)	10 psf			20 psf			30 psf			40 psf			50 psf			60 psf			70 psf			80 psf			90 psf			100 psf			110 psf			120 psf			Exposed Mod.	Edge Mod.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Wind Speed (mph)	Roof Slope (deg.)	Ground Snow (0 psf)	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 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1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group

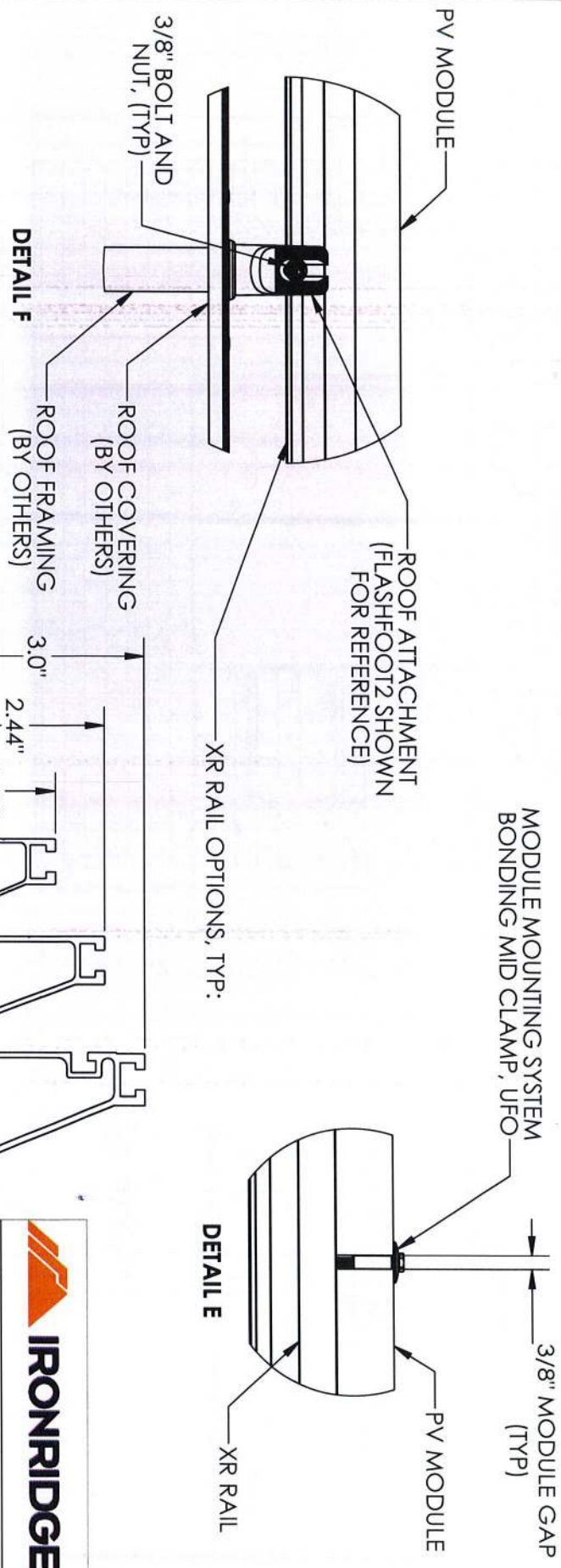
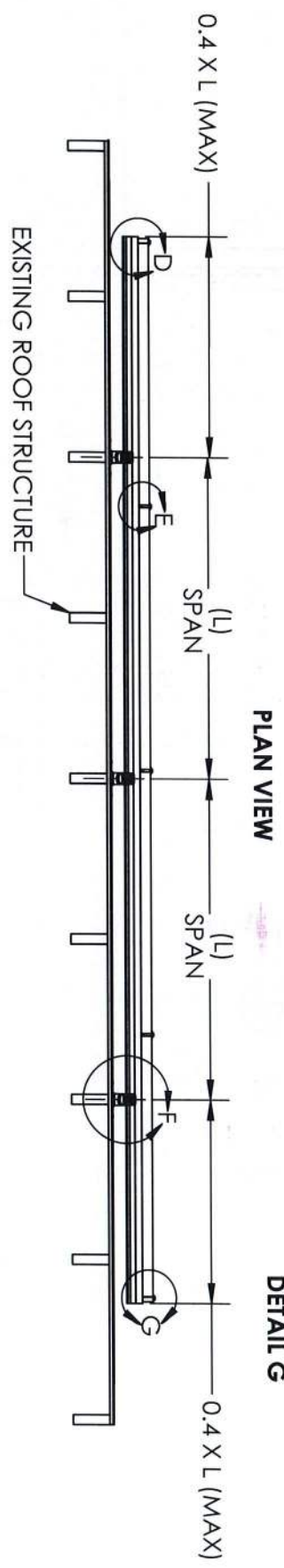
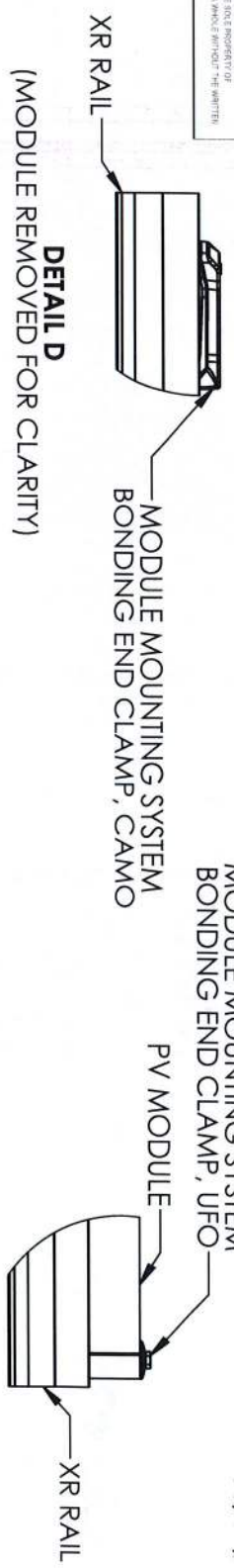
Roof Slope	8° - 20°	21° - 27°	28° - 45°
Group	1	2	3
ASCE 7-16 Roof Zones	1	2e	3



Notation (Per ASCE 7-16)
a = 10% of least horizontal dimension or 0.4h, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 ft (0.9 m). If an overhang exists, the edge distance shall be measured from the outside edge of the overhang. The horizontal dimensions used to compute the edge distance shall not include any overhang distances.
B = Horizontal dimension of building measured normal to wind direction, in ft (m).
h = Mean roof height, in ft (m).
θ = Angle of plane of roof from horizontal, in degrees.

1. Sarah E. Stenabaugh, 2015 Design Wind Loads for Solar Modules Mounted Parallel to the Roof of a Low-rise Building, University of Western Ontario, Ph.D Program Dissertation.





Q.PEAK DUO L-G5.3

380-400

ENDURING HIGH
PERFORMANCE



Q.ANTUM TECHNOLOGY: LOW LEVELISED COST OF ELECTRICITY

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 20.1%.



INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology¹, Hot-Spot Protect and Traceable Quality Tra.Q™.



EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (2400 Pa).



A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance warranty².



STATE OF THE ART MODULE TECHNOLOGY

Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.

¹ APT test conditions according to IEC/TS 62804-1:2015, method B (-1500V, 168h)

² See data sheet on rear for further information.



THE IDEAL SOLUTION FOR:

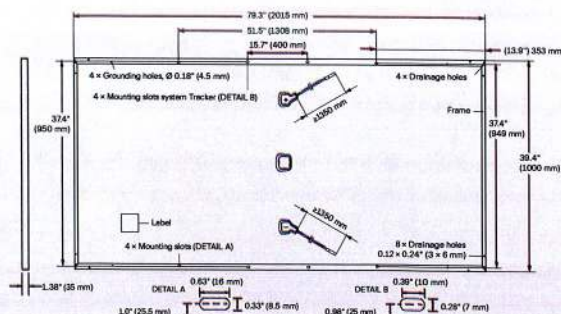


Rooftop arrays on
commercial/industrial
buildings



Ground-mounted
solar power plants

Format	79.3in x 39.4in x 1.38in (including frame) (2015mm x 1000mm x 35mm)
Weight	50.7lbs (23kg)
Front Cover	0.13in (3.2mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodized aluminum
Cell	6 x 24 monocrystalline Q.ANTUM solar half cells
Junction Box	2.09-3.98in x 1.26-2.36in x 0.59-0.71in (53-101mm x 32-60mm x 15-18mm), IP67, with bypass diodes
Cable	4mm ² Solar cable; (+) ≥53.1in (1350mm), (-) ≥53.1in (1350mm)
Connector	Stäubli MC4-Evo2, Amphenol UTX, Renhe 05-8, Tonglin TL-Cable01S-F, IP68 or Friends PV2e; IP67



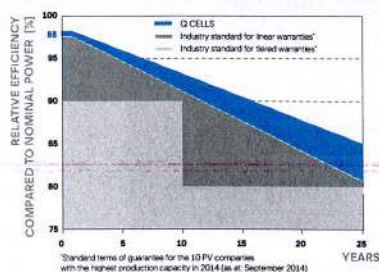
ELECTRICAL CHARACTERISTICS

POWER CLASS			380	385	390	395	400
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)							
Minimum	Power at MPP ¹	P _{MPP} [W]	380	385	390	395	400
	Short Circuit Current ¹	I _{SC} [A]	10.05	10.10	10.14	10.19	10.24
	Open Circuit Voltage ¹	V _{OC} [V]	47.95	48.21	48.48	48.74	49.00
	Current at MPP	I _{MPP} [A]	9.57	9.61	9.66	9.70	9.75
	Voltage at MPP	V _{MPP} [V]	39.71	40.05	40.38	40.71	41.04
	Efficiency ¹	η [%]	≥18.9	≥19.1	≥19.4	≥19.6	≥19.9
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²							
Minimum	Power at MPP	P _{MPP} [W]	284.4	288.2	291.9	295.6	299.4
	Short Circuit Current	I _{SC} [A]	8.10	8.14	8.17	8.21	8.25
	Open Circuit Voltage	V _{OC} [V]	45.21	45.46	45.71	45.96	46.21
	Current at MPP	I _{MPP} [A]	7.53	7.57	7.60	7.64	7.67
	Voltage at MPP	V _{MPP} [V]	37.77	38.08	38.40	38.71	39.02

¹Measurement tolerances P_{MPP} ±3%; I_{SC}; V_{OC} ±5% at STC: 1000 W/m², 25 ±2 °C, AM 1.5 G according to IEC 60904-3 • 2800 W/m², NMOT, spectrum AM 1.5 G

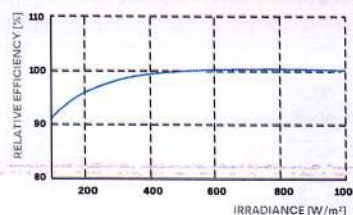
Q CELLS PERFORMANCE WARRANTY

PERFORMANCE AT LOW IRRADIANCE



At least 98% of nominal power during first year. Thereafter max. 0.54% degradation per year. At least 93.1% of nominal power up to 10 years. At least 85% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²)

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{SC}	α	[%/K]	+0.04	Temperature Coefficient of V _{OC}	β	[%/K]	-0.27
Temperature Coefficient of P _{MPP}	γ	[%/K]	-0.36	Normal Module Operating Temperature	NMOT	[°F]	109 ± 5.4 (43 ± 3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V _{sys}	[V]	1500 (IEC)/1500 (UL)	Safety Class	II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating	C / TYPE 1
Max. Design Load, Push / Pull ³	[lbs / ft ²]	75 (3600 Pa) / 33 (1600 Pa)	Permitted Module Temperature on Continuous Duty	-40 °F up to +185 °F (-40 °C up to +85 °C)
Max. Test Load, Push / Pull ³	[lbs / ft ²]	113 (5400 Pa) / 50 (2400 Pa)		

³See Installation Manual

QUALIFICATIONS AND CERTIFICATES

UL 1703, CE-compliant, IEC 61215:2016, IEC 61730:2016, Application Class II, U.S. Patent No. 9,893,215 (solar cells)



PACKAGING INFORMATION

Number of Modules per Pallet	29
Number of Pallets per 53' Trailer	27
Number of Pallets per 40' HC-Container	22
Pallet Dimensions (L x W x H)	81.9 x 45.3 x 46.9 in (2080 x 1150 x 1190 mm)
Pallet Weight	1603 lbs (727 kg)

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US /
SE7600H-US / SE10000H-US / SE11400H-US

12-25
YEAR
WARRANTY



INVERTERS

Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking efficiency
- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Extremely small
- Built-in module-level monitoring
- Outdoor and indoor installation
- Optional: embedded consumption metering and production revenue grade metering, ANSI C12.20 Class 0.5 (0.5% accuracy)

solar edge

Single Phase inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/
SE7600H-US / SE10000H-US / SE11400H-US

MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXXXH-XXXXXBXX4							
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5 ⁽¹⁾							Hz
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5	A
Power Factor	1, adjustable -0.85 to 0.85							
GFDI Threshold	1							A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes							
INPUT								
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W
Maximum DC Power @208V	-	5100	-	7750	-	-	15500	W
Transformer-less, Ungrounded	Yes							
Maximum Input Voltage	480							Vdc
Nominal DC Input Voltage	380				400			Vdc
Maximum Input Current @240V ⁽²⁾	8.5	10.5	13.5	16.5	20	27	30.5	Adc
Maximum Input Current @208V ⁽²⁾	-	9	-	13.5	-	-	27	Adc
Max. Input Short Circuit Current	45							Adc
Reverse-Polarity Protection	Yes							
Ground-Fault Isolation Detection	600k Ω Sensitivity							
Maximum Inverter Efficiency	99	99.2						%
CEC Weighted Efficiency	99						99 @ 240V 98.5 @ 208V	%
Nighttime Power Consumption	< 2.5							W

⁽¹⁾ For other regional settings please contact SolarEdge support

⁽²⁾ A higher current source may be used; the inverter will limit its input current to the values stated

Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/
SE7600H-US / SE10000H-US / SE11400H-US

MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US
ADDITIONAL FEATURES							
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)						
Revenue Grade Metering, ANSI C12.20	Optional ⁽³⁾						
Consumption metering							
Inverter Commissioning	with the SetApp mobile application using built-in Wi-Fi Access Point for local connection						
Rapid Shutdown - NEC 2014 and 2017 690.12	Automatic Rapid Shutdown upon AC Grid Disconnect						
STANDARD COMPLIANCE							
Safety	UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCI according to T.I.L. M-07						
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (HI)						
Emissions	FCC Part 15 Class B						
INSTALLATION SPECIFICATIONS							
AC Output Conduit Size / AWG Range	1" Maximum / 14-6 AWG				1" Maximum /14-4 AWG		
DC Input Conduit Size / # of Strings / AWG Range	1" Maximum / 1-2 strings / 14-6 AWG				1" Maximum / 1-3 strings / 14-6 AWG		
Dimensions with Safety Switch (HxWxD)	17.7 x 14.6 x 6.8 / 450 x 370 x 174				21.3 x 14.6 x 7.3 / 540 x 370 x 185		in / mm
Weight with Safety Switch	22 / 10	25.1 / 11.4	26.2 / 11.9	38.8 / 17.6		lb / kg	
Noise	< 25				<50		dBA
Cooling	Natural Convection						
Operating Temperature Range	-40 to +140 / -40 to +60 ⁽⁴⁾						°F / °C
Protection Rating	NEMA 4X (Inverter with Safety Switch)						

⁽³⁾ Inverter with Revenue grade meter P/N: SExxxxH-US000BNC4; Inverter with Revenue grade and consumption meter P/N: SExxxxH-US000BNI4. For consumption metering current transformers should be ordered separately: SEACT0750-200NA-20 or SEACT0750-400NA-20. 20 units per box

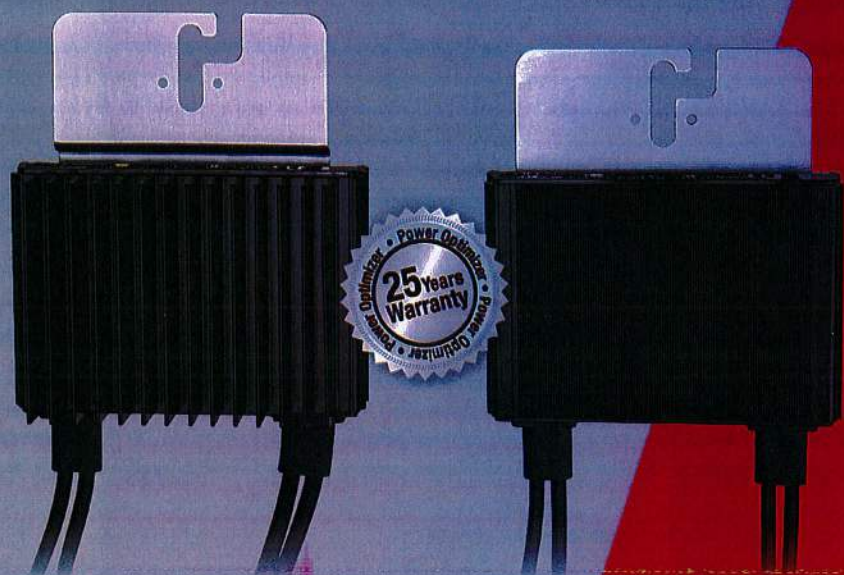
⁽⁴⁾ Full power up to at least 50°C / 122°F; for power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf>



Power Optimizer

P320 / P370 / P400 / P405 / P505

POWER OPTIMIZER



PV power optimization at the module-level

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Fast installation with a single bolt
- Next generation maintenance with module-level monitoring
- Compliant with arc fault protection and rapid shutdown NEC requirements (when installed as part of the SolarEdge system)
- Module-level voltage shutdown for installer and firefighter safety



Power Optimizer

P320 / P370 / P400 / P405 / P505

OPTIMIZER MODEL (typical module compatibility)	P320 (for high-power 60-cell modules)	P370 (for higher-power 60 and 72-cell modules)	P400 (for 72 & 96-cell modules)	P405 (for thin film modules)	P505 (for higher current modules)	
INPUT						
Rated Input DC Power ⁽¹⁾	320	370	400	405	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	48	60	80	125	83	Vdc
MPPT Operating Range	8 - 48	8 - 60	8 - 80	12.5 - 105	12.5 - 83	Vdc
Maximum Short Circuit Current (Isc)	11		10.1		14	Adc
Maximum DC Input Current	13.75		12.63		17.5	Adc
Maximum Efficiency	99.5					%
Weighted Efficiency	98.8				98.6	%
Overvoltage Category	II					
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)						
Maximum Output Current	15					Adc
Maximum Output Voltage	60			85		Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)						
Safety Output Voltage per Power Optimizer	1 ± 0.1					Vdc
STANDARD COMPLIANCE						
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3					
Safety	IEC62109-1 (class II safety), UL1741					
RoHS	Yes					
INSTALLATION SPECIFICATIONS						
Maximum Allowed System Voltage	1000					Vdc
Compatible Inverters	All SolarEdge Single Phase and Three Phase Inverters					
Dimensions (W x L x H)	128 x 152 x 28 / 5 x 5.97 x 1.1	128 x 152 x 36 / 5 x 5.97 x 1.42	128 x 152 x 50 / 5 x 5.97 x 1.96	128 x 152 x 59 / 5 x 5.97 x 2.32		mm / in
Weight (including cables)	630 / 1.4	750 / 1.7	845 / 1.9	1064 / 2.3		gr / lb
Input Connector	MC4 ⁽²⁾					
Output Wire Type / Connector	Double Insulated; MC4					
Output Wire Length	0.95 / 3.0	1.2 / 3.9				m / ft
Operating Temperature Range	-40 - +85 / -40 - +185					°C / °F
Protection Rating	IP68 / NEMA6P					
Relative Humidity	0 - 100					%

⁽¹⁾ Rated STC power of the module. Module of up to +5% power tolerance allowed.

⁽²⁾ For other connector types please contact SolarEdge

PV SYSTEM DESIGN USING A SOLAREEDGE INVERTER ⁽³⁾⁽⁴⁾		SINGLE PHASE HD-WAVE	SINGLE PHASE	THREE PHASE 208V	THREE PHASE 480V	
Minimum String Length (Power Optimizers)	P320, P370, P400 P405 / P505	8 6		10 8	18 14	
Maximum String Length (Power Optimizers)		25		25	50 ⁽⁵⁾	
Maximum Power per String		5700 (6000 with SE7600-US - SE11400-US)	5250	6000	12750	W
Parallel Strings of Different Lengths or Orientations			Yes			

⁽³⁾ For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string_sizing_na.pdf.

⁽⁴⁾ It is not allowed to mix P405/P505 with P320/P370/P400/P600/P700/P800 in one string.

⁽⁵⁾ A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement

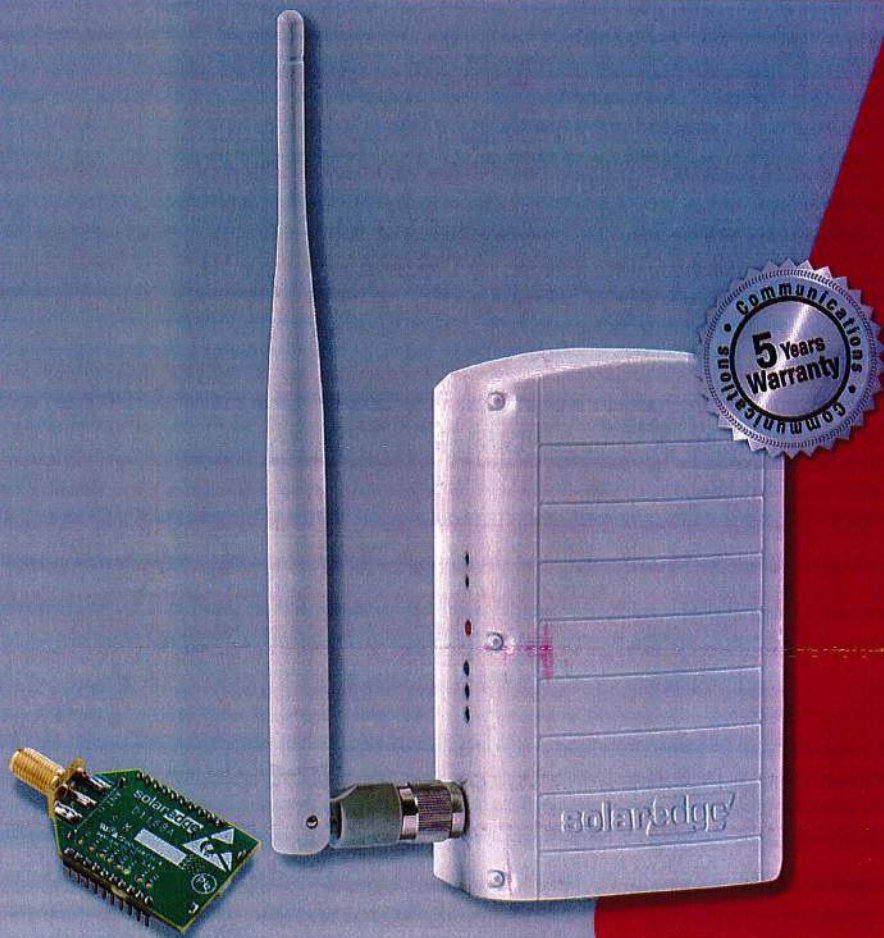


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ZigBee Plug-in for North America

SE1000-ZBGW-K5-NA / SE1000-ZB05-SLV / SE1000-ZBRPT05-NA

COMMUNICATION



Simple Wireless Connectivity

- Connects SolarEdge inverters wirelessly to an Internet router
- ZigBee Plug-in installed within the inverter enclosure for outdoor resilience
- Antenna external to inverter for wider range
- Communication to Internet via Ethernet
- The ZigBee Gateway supports up to 15 SolarEdge devices (e.g. inverters) on the wireless network





ZigBee Plug-in for North America

SE1000-ZBGW-K5-NA / SE1000-ZB05-SLV / SE1000-ZBRPT05-NA

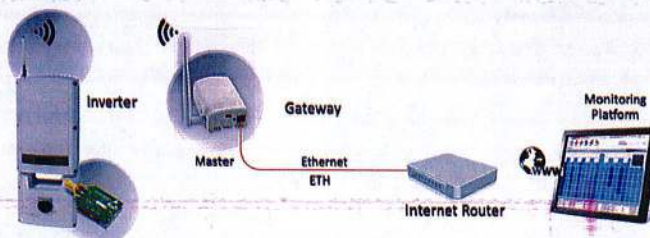
COMPATIBLE INVERTERS	SEXxxx-xxxxNxxx (INVERTERS WITH A DISPLAY)	
FUNCTIONAL		UNIT
Number of devices that can be monitored	1-15	
RF PERFORMANCE		
Transmit power	22.8	dBm
Receiver Sensitivity	-102	dBm
EIRP with antenna	27.8	dBm
Maximum Emitted Power	≤ 30	dBm
Antenna gain	5	dBi
Operating Frequency Range	2.4-2.5	GHz
Outdoor (LOS) range	400 / 1300	m / ft
Indoor range ⁽¹⁾	50 / 160	m / ft
ZIGBEE GATEWAY / ZIGBEE REPEATER		
Antenna	Included	
Power supply	Included, 100-240VAC	
Operating temperature	-20 to +60 / -4 to +140	°C / °F
Relative humidity (non condensing)	0 - 80	%
Ingress protection	IP20 (Indoor)	
ZIGBEE PLUG-IN		
Antenna, mounting bracket and RF cable	Included	
Dimensions (H x W x D)	22.0 x 32.9 x 4.1 / 0.9 x 1.3 x 0.2	mm / in
Ingress protection	IP65 (IP20 / indoor rated when installed inside Commercial Gateway or Firefighter Gateway)	
CERTIFICATION		
Safety	IEC60950, UL60950	
EMC Approvals	FCC(USA), IC(Canada)	

⁽¹⁾ Approximate values, may differ depending on specific installation conditions

Scenario A: Basic Kit

Part Number: SE1000-ZBGW-K5-NA

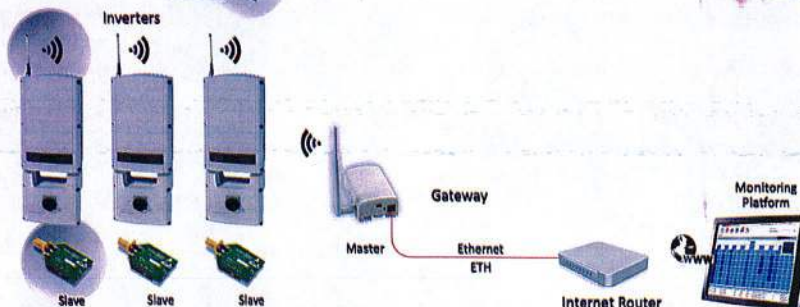
- 1 x ZigBee Gateway
- 1 x ZigBee Plug-in for single SolarEdge device



Scenario B: Adding additional slave units

Part Number: SE1000-ZB05-SLV

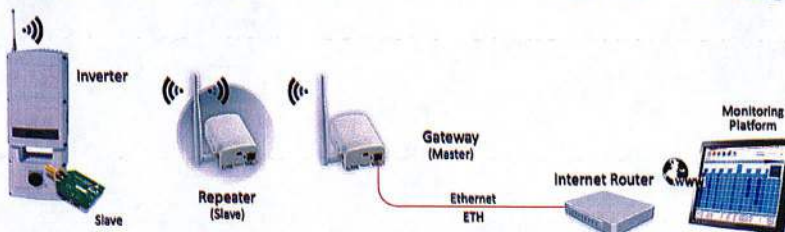
- 1x ZigBee Plug-in for connecting multiple devices to the same home gateway



Scenario C: Extending range using a repeater

Part Number: SE1000-ZBRPT05-NA

- 1 x ZigBee Repeater for extending the ZigBee range



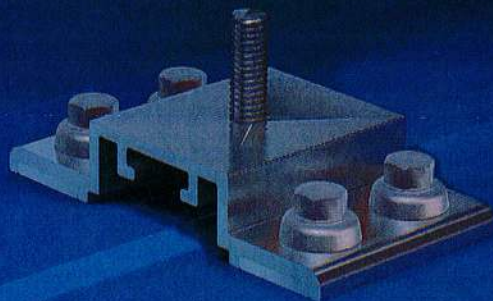
S-5!®

The Right Way!

NEW PRODUCT
SolarFoot™

Introducing the new SolarFoot™ for exposed fastener metal roofing with the strength, testing, quality, and time-proven integrity you expect from S-5!. The SolarFoot provides an ideal mounting platform to attach the L-Foot (not included) of a rail-mounted PV system to the roof. This solution is The Right Way to secure rail-mounted solar systems to exposed fastener metal such as AG-Panel or R-Panel.

The right way to attach almost anything to metal roofs!



SolarFoot Features:

Manufactured in the U.S.A. from certified raw material

Fabricated in our own ISO 9001:2015 certified factory

All aluminum and stainless components

25yr limited warranty

Compatible with all commercial L-Foot products on the market

Factory applied 40-year isobutylene/isoprene crosslink polymer sealant for reliable weathertightness

Sealant reservoir to prevent over-compression of sealant

Load-to-failure tested Normal to Seam by a nationally accredited laboratory on numerous metal roof materials and substrates

Four points of attachment into structure or deck with tested holding strength for engineered applications

Integrated M8-1.25x17mm stud and M8-1.25 stainless steel hex flange nut included

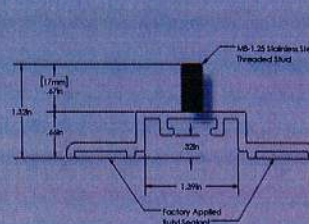
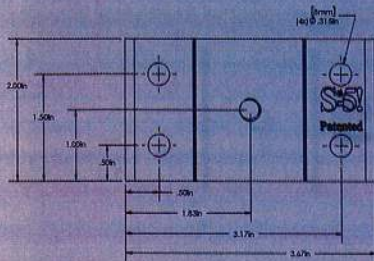


888-825-3432 | www.S-5.com



SolarFoot™ Mounting for Exposed Fastener Roofing

The SolarFoot is a simple, cost-effective pedestal for L-Foot (not included) attachment of rail-mounted solar PV. The unique design is compatible with all rail producer L-Foot components. The new SolarFoot assembly ensures a durable weathertight solution for the life of the roof. Special factory applied butyl co-polymeric sealant contained in a reservoir is The Right Way, allowing a water-tested seal. Stainless integrated stud and hex flange lock-nut secure the L-Foot into position. A low center of gravity reduces the moment arm commonly associated with L-Foot attachments. Direct attachment of the SolarFoot to the structural member or deck provides unparalleled holding strength.



*Fasteners sold separately. Fastener type varies with substrate. Contact S-5! on how to purchase fasteners and obtain our test results. L-Foot also sold separately.

Fastener Selection



Metal to Metal:
1/4-14 Self Drilling Screw
1-1/2" to 2-1/2"



Metal to Wood:
1/4-14 Type 17 AB Milled Point
1-1/2" to 2-1/2"

To source fasteners for your projects, contact S-5!

When other brands claim to be "just as good as S-5!", tell them to PROVE IT.

SolarFoot Advantages:

Exposed fastener mounting platform for solar arrays attached via L-Foot and Rails

Weatherproof attachment to exposed fastener roofing

Butyl sealant reservoir provides long-term waterproof seal

M8-1.25x17mm stud with M8 hex flange nut for attachment of all popular L-Foot/rail combinations

Tool: 13 mm Hex Socket or 1/2" Hex Socket

Tool Required: Electric screw gun with hex drive socket for self-tapping screws.

Low Center of Gravity reduces moment arm commonly associated with L-Foot/Rail solar mounting scenarios

Attaches directly to structure or deck for optimal holding strength

S-5! Recommended substrate-specific (e.g. steel purlin, wood 2x4, OSB, etc.) fasteners provide excellent waterproofing and pull-out strength

Fastener through-hole locations comply with NDS (National Design Specification) for Wood Construction

S-5!® Warning! Please use this product responsibly!

The independent lab test data found at www.S-5.com can be used for load-critical designs and applications.

Products are protected by multiple U.S. and foreign patents. For published data regarding holding strength, fastener torque, patents, and trademarks, visit the S-5! website at www.S-5.com. Copyright 2017, Metal Roof Innovations, Ltd. S-5! products are patent protected.

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