

PITCHED ROOF

Project Details

NAME	Michael O'Brien	DATE	2018-11-18
LOCATION	Milwaukee, WI, 53210	TOTAL MODULES	14
MODULE	Solarworld:SW 350 XL MONO (33mm)	TOTAL WATTS	4,900
DIMENSIONS	78.46" x 39.41" x 1.30" (1,993 x 1,001 x 33mm)	ATTACHMENT PTS	28

Load Assumptions

WIND EXPOSURE	B
WIND SPEED	100 mph
GROUND SNOW LOAD	30 psf
ATTACHMENT SPACING	4.0 ft

Building Details

ROOF SLOPE	35 deg
BUILDING HEIGHT	20 ft
RISK CATEGORY	I

Engineering

XR100 SPAN DETAILS (Portrait)

Roof Zone	Max Span	Max Cantilever
1	6'	2' 5"
2	6'	2' 5"
3	6'	2' 5"

MAXIMUM REACTION FORCES (Portrait)

Roof Zone	Down	Uplift	Lateral
1	209.00	-105.00	101.00
2	209.00	-123.00	101.00
3	209.00	-123.00	101.00

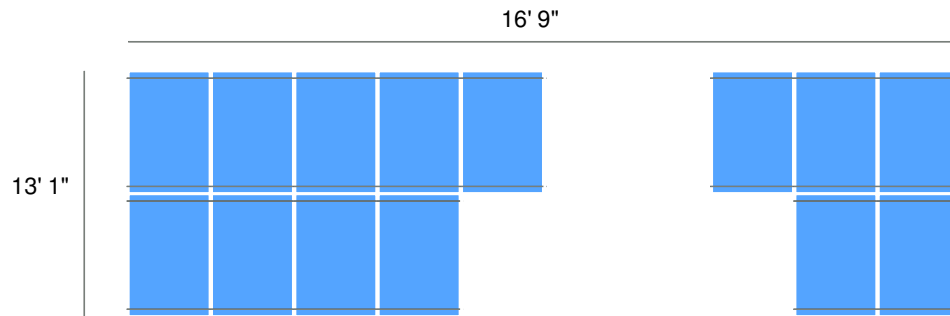
System Weight

TOTAL WEIGHT	793 lbs
WEIGHT/ATTACHMENT	28.3 lbs
DISTRIBUTED WEIGHT	2.6 psf
RACKING WEIGHT	126.4 lbs

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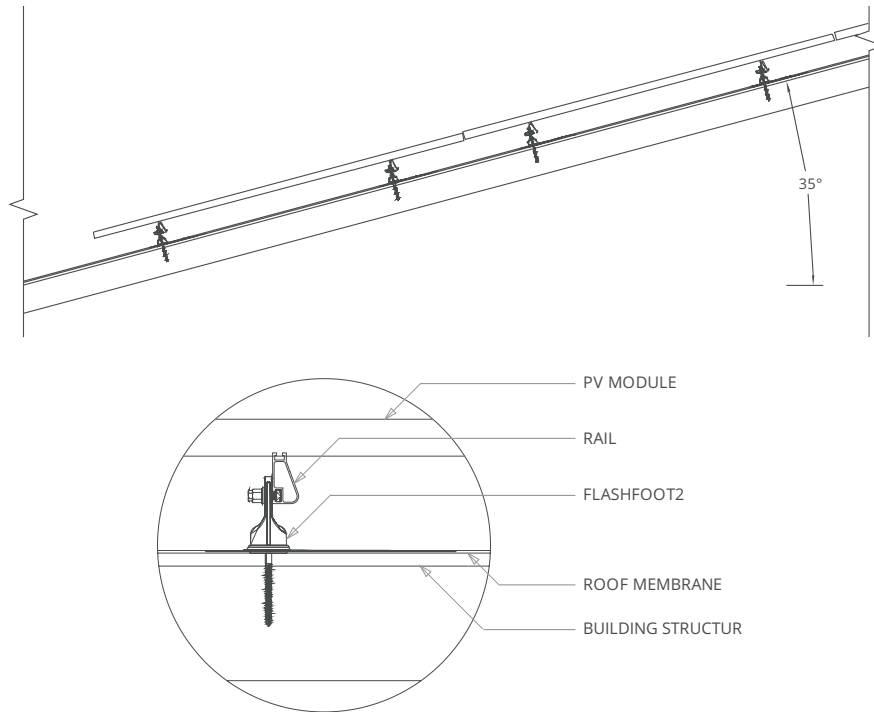
Array Details

Array	Cols	Rows	Orientation	Row Length	Cantilever	Violations	Provided Rails	Attachments	Clamps	Splices
A	5	1	PORTRAIT	16' 8.6"	4"	None	34'[2 x 17']	10	12	0
A	3	1	PORTRAIT	10' 1"	1'	None	28'[2 x 14']	6	8	0
A	4	1	PORTRAIT	13' 4.8"	8"	None	28'[2 x 14']	8	10	0
A	2	1	PORTRAIT	6' 9.2"	1' 5"	None	28'[2 x 14']	4	6	0

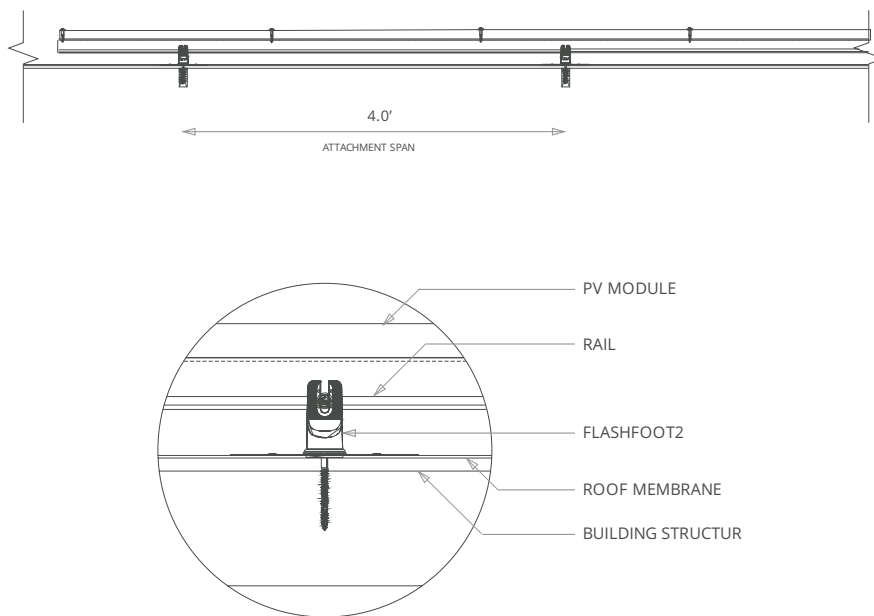


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Side View (Portrait)

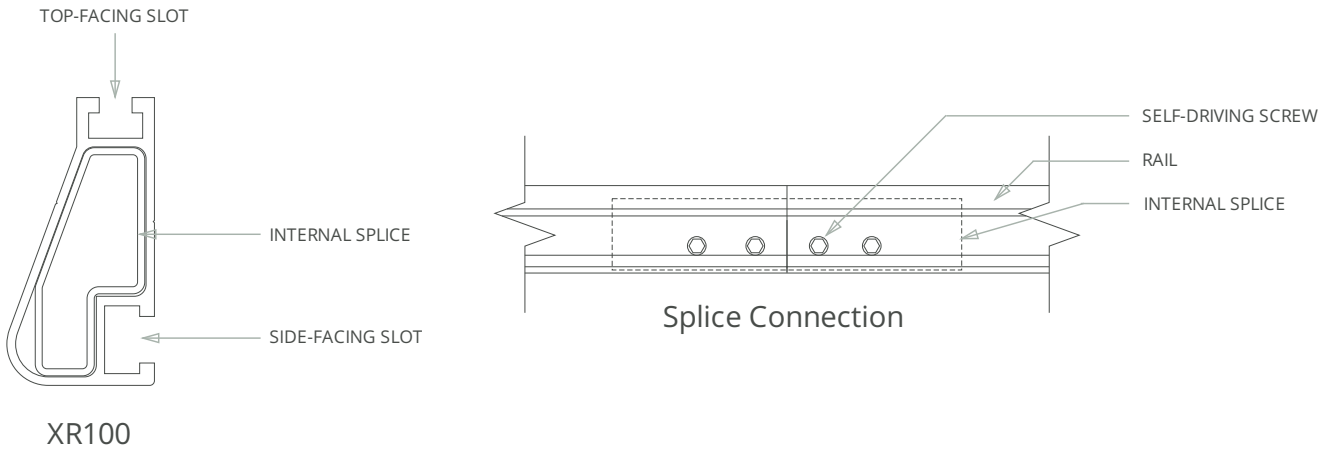


Front View (Portrait)

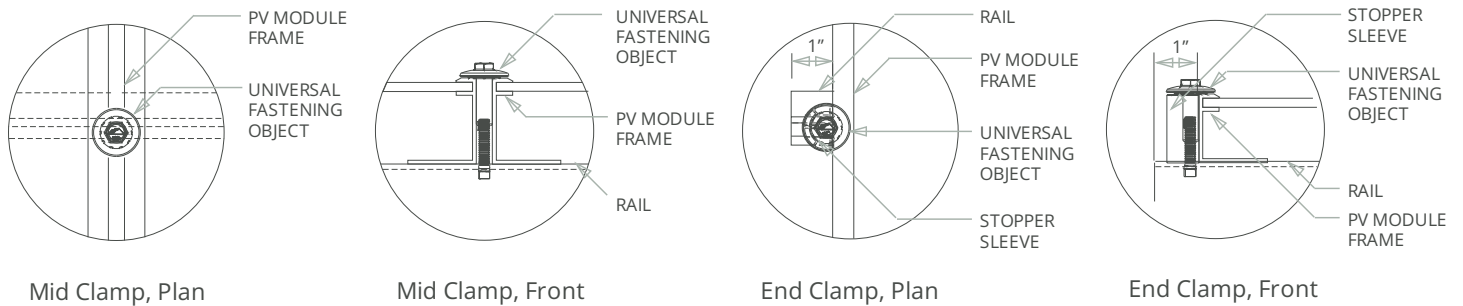


Note: The images displayed in this report are meant to represent one portion of the array. The use of a break line indicates that the array may continue on beyond that point.

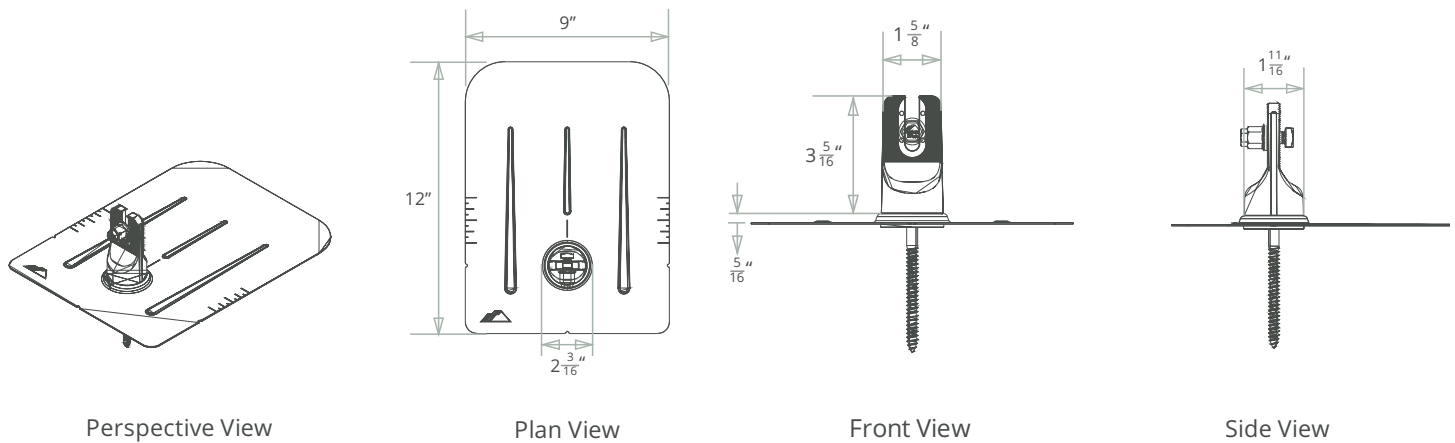
Splice Detail



Clamp Detail

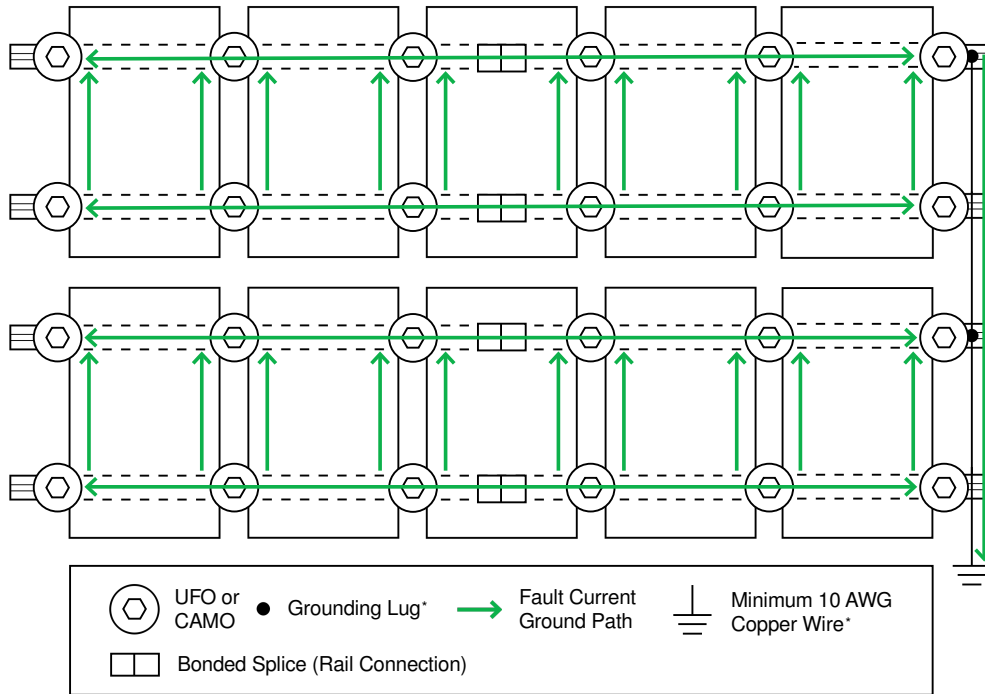


FlashFoot2 Detail



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Grounding Diagram



*Grounding Lugs and wire are not required in systems using certain Enphase microinverters or certain Sunpower modules. Equipment grounding is achieved with the Engage cable for Enphase or the AC module cable system for Sunpower via their integrated EGC.

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Bill of Materials

GROUP	PART	DESCRIPTION	TOTAL QTY
RAILS & SPLICES	XR-100-168A	XR100, Rail 168" (14 Feet) Clear	6
	XR-100-204A	XR100, Rail 204" (17 Feet) Clear	2
CLAMPS & GROUNDING	UFO-CL-01-A1	Universal Module Clamp, Clear	36
	UFO-STP-33MM-M1	Stopper Sleeve, 33MM, Mill	16
	XR-LUG-03-A1	Grounding Lug, Low Profile	4
ATTACHMENTS	FF2-01-M1	FlashFoot2, Mill	28
	BHW-SQ-02-A1	Square-Bolt Bonding Hardware	28