

CERTIFICATE OF APPROPRIATENESS

Applicant: Michael Pensabene, agent for Clayton Mealer, owner

Property: 215 Bayland Ave, Tracts 23 & 24, Block 4, Woodland Heights Subdivision. The property includes a historic 5,772 square foot two-story wood frame single-family residence situated on a 8,000 square foot (100' x 80') corner lot.

Significance: Contributing Queen Anne residence, constructed circa 1903, with a two-story rear addition located in the Woodland Heights Historic District.

Proposal: Alteration—Installation of solar panels without a COA or city permits.

- The solar panels installed are 19.3 kw roof mounted PV solar system.
- Solar panels are installed on the south, west, and east sides of the roof.
- Solar panels are visible from the right of way.

Public Comment: No public comment received.

Civic Association: No comment received.

Recommendation: Approval with conditions: Staff recommends issuance of a COR to remove the solar panels located on the front south location and the front east location.

HAHC Action: -

APPROVAL CRITERIA

ADMINISTRATIVE APPROVALS

Sec. 33-241.1(c): The director is authorized to issue a certificate of appropriateness for the following activities if the director finds that the proposed activity will be performed in a manner that satisfies the criteria for alterations, additions, or new construction in this article, as applicable. If the director finds that an application for a certificate of appropriateness pursuant to this subsection does not satisfy the applicable criteria, or that the application does not satisfy the general intent and purposes of this article, the director shall refer the application to the HAHC for consideration.

- | A | NA | | A - applies | NA - not applicable |
|-------------------------------------|-------------------------------------|--|--------------------|----------------------------|
| | | (4) Installation of: | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | a. Burglar bars | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | b. Accessibility ramps or lifts | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | c. Low-profile skylights, shutters, solar panels, antennae, satellite dishes, or other roof equipment installed on the front half of the roof; and | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | d. Awnings and canopies; | | |

ALTERATIONS, REHABILITATIONS, RESTORATIONS AND ADDITIONS

Sec. 33-241: HAHC shall issue a certificate of appropriateness for the alteration, rehabilitation, restoration or addition of an exterior feature of (i) any landmark, (ii) protected landmark, (iii) any building, structure or object that is part of an archaeological site, or (iv) contributing building in a historic district upon finding that the application satisfies the following criteria, as applicable:

- | S | D | NA | | S - satisfies | D - does not satisfy | NA - not applicable |
|-------------------------------------|-------------------------------------|-------------------------------------|--|----------------------|-----------------------------|----------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (1) The proposed activity must retain and preserve the historical character of the property;
<i>Solar panels are visible from the right of way, therefore, do not meet Criteria 1.</i> | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (2) The proposed activity must contribute to the continued availability of the property for a contemporary use; | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (3) The proposed activity must recognize the building, structure, object or site as a product of its own time and avoid alterations that seek to create an earlier or later appearance;
<i>Solar panels are visible from the right of way, therefore, do not meet Criteria 3.</i> | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (4) The proposed activity must preserve the distinguishing qualities or character of the building, structure, object or site and its environment;
<i>Solar panels are visible from the right of way, therefore, do not meet Criteria 4.</i> | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (5) The proposed activity must maintain or replicate distinctive stylistic exterior features or examples of skilled craftsmanship that characterize the building, structure, object or site; | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (6) New materials to be used for any exterior feature excluding what is visible from public alleys must be visually compatible with, but not necessarily the same as, the materials being replaced in form, design, texture, dimension and scale;
<i>Solar panels are visible from the right of way, therefore, do not meet Criteria 6.</i> | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (7) The proposed replacement of exterior features, if any, should be based on an accurate duplication of features, substantiated by available historical, physical or pictorial evidence, where that evidence is available, rather than on conjectural designs or the availability of different architectural elements from other structures; | | | |

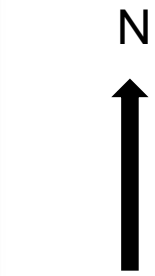
- (8) Proposed additions or alterations must be done in a manner that, if removed in the future, would leave unimpaired the essential form and integrity of the building, structure, object or site;
- (9) The proposed design for any exterior alterations or addition must not destroy significant historical, architectural, archaeological or cultural material, including but not limited to siding, windows, doors and porch elements;
- (10) The proposed alteration or addition must be compatible with the massing, size, scale material and character of the property and the context area; and
- (11) The distance from the property line to the front and side walls, porches, and exterior features of any proposed addition or alteration must be compatible with the distance to the property line of similar elements of existing contributing structures in the context area.

District Map

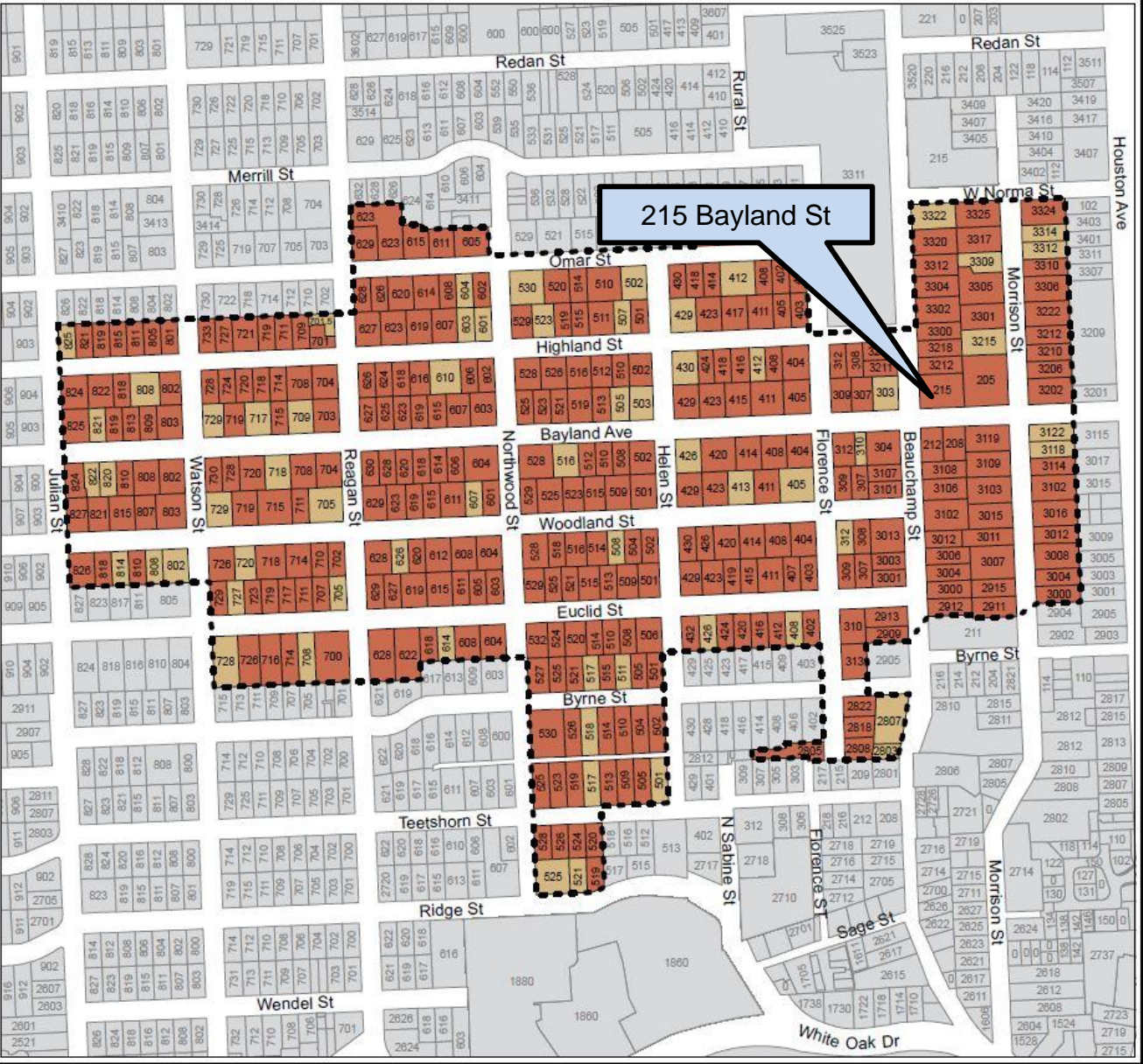
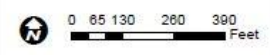
Woodland Heights Historic District

Historic District Boundary

Building Classification
Contributing
Non-Contributing



Established: July 29, 2011
Source: GIS Services Division
Date: March 11, 2014
Reference: pj17480



Inventory Photograph



Current Photograph



Work Completed



Front of house (facing south)

Work Completed



Side of house (east side)

Work Completed



Side of house (west side)

Site Plan

LEAD ID: 44387

CONSTRUCTION SUMMARY

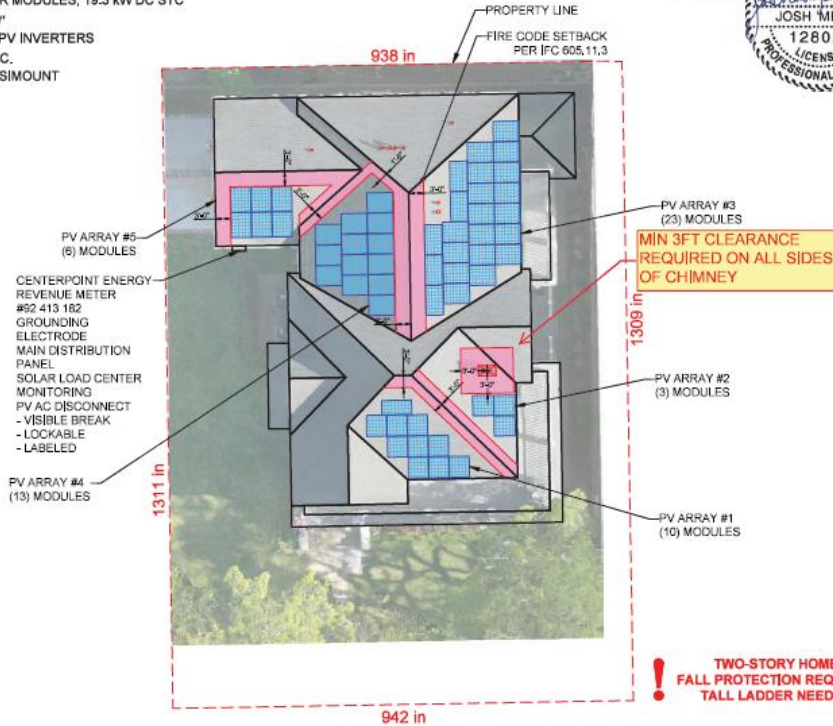
- (55) (SUNPOWER SPR-X21-350-BLK-E-AC) SOLAR MODULES, 19.3 KW DC STC
MODULE DIMENSIONS = 41.2" X 61.3" X 1.80"
- (55) SUNPOWER SPR-X21-350-BLK-E-AC [240V] PV INVERTERS
COMBINED INVERTER OUTPUT = 17.3 KW AC.
(40 X 10.75") LINEAR FEET SUNPOWER INVISIMOUNT
- (430) QMSE-LAG ROOF ATTACHMENTS
- (120) SUNPOWER MONITORING

SITE DETAILS

ROOF TYPE: ASPHALT SHINGLE
 ARRAY #1 - TILT = 45°, AZIMUTH = 179°
 ARRAY #2 - TILT = 45°, AZIMUTH = 89°
 ARRAY #3 - TILT = 30°, AZIMUTH = 89°
 ARRAY #4 - TILT = 30°, AZIMUTH = 269°
 ARRAY #5 - TILT = 33°, AZIMUTH = 179°
 INSTALLATION DIFFICULTY = 13 => HARD

NOTE:-
 NO ENCROACHMENT INTO EASEMENTS BY
 NEW SCOPE OF WORK (SOLAR PANELS,
 RACK/RAIL SYSTEMS & EQUIPMENT

DESIGN CRITERIA V_{ult}=142MPH
 WITH 3-SECOND GUSTS per
 ASCE 7-10
 PSF GROUND SNOW LOAD=0
 EXPOSURE B,



5,24,21
F-17690



PREPARED BY: JOSH MEADE
 DATE: 07/29/21
 PROJECT: 2021_0163

DESCRIPTION	DATE	REV
DESIGN PACKET	04/30/21	A
ADD CLEARANCE AROUND CHIMNEY	05/04/21	B

CONTRACTOR

FREEDOM SOLAR POWER
 FREEDOM SOLAR LLC
 4801 FREDERICH LA. STE 100
 AUSTIN, TX 78744
 TEL: # 2021
 TEX. PERM # F-17690

PROJECT NAME
MEALER, CLAYTON
 215 BAYLAND AVENUE
 HOUSTON, TEXAS, 77009
 (260) 402-3781

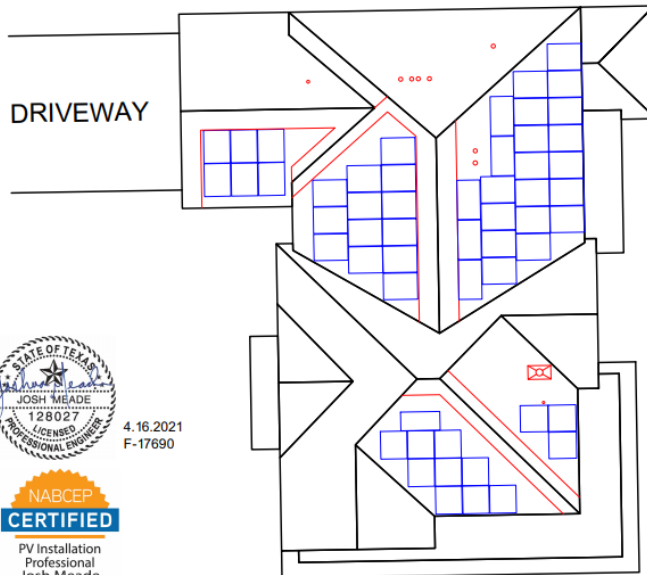
SHEET NAME
SITE MAP & PV LAYOUT

SHEET SIZE
**ANSI B
 11" x 17"**

SHEET NUMBER
PV-1

CONSTRUCTION NOTES

- 1) ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 2) ALL OUTDOOR EQUIPMENT SHALL BE RAIN-TIGHT WITH MINIMUM NEMA 3R RATING.
- 3) ALL LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.
- 4) TYP. ROOF ATTACHMENT SPACING SHALL BE 6'-0" MAX FOR LAG BOLT TYPE ROOF ATTACHMENTS ANCHORED TO RAFTERS
- 5) TYP. ROOF ATTACHMENT SPACING SHALL BE 4'-6" MAX FOR S-SI CLAMPS ANCHORED TO STANDING SEAM ROOF PANELS



4.16.2021
F-17690



PV Installation
 Professional
 Josh Meade
 Cert #PV-041115-010201

Solar Panel Information

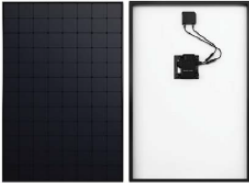


SUNPOWER®

X-Series: X21-350-BLK | X21-335-BLK | X20-327-BLK

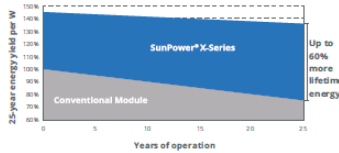
SunPower® Residential AC Module

Built specifically for use with the SunPower Equinox™ system, the only fully integrated solution designed, engineered and warranted by one manufacturer.



Maximum Power. Minimalist Design.
Industry-leading efficiency means more power and savings per available space. With fewer modules required and hidden microinverters, less is truly more.

Highest Lifetime Energy and Savings.
Designed to deliver 60% more energy over 25 years in real-world conditions like partial shade and high temperatures.*



Best Reliability. Best Warranty.
With more than 25 million modules deployed around the world, SunPower technology is proven to last. That's why we stand behind our module and microinverter with the industry's best 25-year Combined Power and Product Warranty, including the highest Power Warranty in solar.



Fundamentally Different. And Better.



- The SunPower® Maxeon® Solar Cell
- Enables highest-efficiency modules available.*
 - Unmatched reliability.*
 - Patented solid metal foundation prevents breakage and corrosion



- Factory-Integrated Microinverter
- Simpler, faster installation
 - Integrated wire management, rapid shutdown
 - Engineered and calibrated by SunPower for SunPower modules

X-Series: X21-350-BLK | X21-335-BLK | X20-327-BLK SunPower® Residential AC Module

AC Electrical Data		
Inverter Model: Enphase IQ 7XS (Q7X-0-AC-MJS)	240 VAC	@208 VAC
Peak Output Power	320 VA	320 VA
Max. Continuous Output Power	315 VA	315 VA
Nom. (L-L) Voltage/Range ¹ (V)	240 / 211-264	208 / 183-229
Max. Continuous Output Current (A)	1.31	1.51
Max. Units per 20 A (L-L) Branch Circuit ²	12 (single phase)	10 (two-pole) wye
CEC Weighted Efficiency	97.5%	97.0%
Nom. Frequency	60 Hz	
Extended Frequency Range	47-68 Hz	
AC Short Circuit Fault Current Over 3 Cycles	5.8 A rms	
Oversvoltage Class AC Port	III	
AC Port Backfeed Current	18 mA	
Power Factor Setting	1.0	
Power Factor (adjustable)	0.7 lead / 0.7 lag	

DC Power Data			
	X21-350-BLK-E-AC	X21-335-BLK-E-AC	X20-327-BLK-E-AC
Nom. Power (P _{nom})	350 W	335 W	327 W
Power Tol.	+5/-0%	+5/-0%	+5/-0%
Module Efficiency	21.5%	21.0%	20.4%
Temp. Coef. (Power)	-0.29%/°C	-0.29%/°C	-0.29%/°C

Tested Operating Conditions	
Operating Temp.	-40°F to 133°F (-40°C to 48°C)
Max. Ambient Temp.	122°F (50°C)
Max. Load	Wind: 62 psf, 3000 Pa, 305 lbf/m ² front & back Snow: 125 psf, 6000 Pa, 611 kg/m ² front
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)

Mechanical Data	
Solar Cells	96 Monocrystalline Maxeon Gen III
Front Glass	High transmission tempered glass with anti-reflective coating
Environmental Rating	Outdoor rated
Frame	Class 1 black anodized (highest AAMA rating)
Weight	42.9 lbs (18.5 kg)
Recommended Max. Module Spacing	1.3 in. (33 mm)

1 SunPower 360 W compared to a conventional module on same-sized arrays (360 W, 16% efficient approx, 1.6 m², 4% more energy per watt based on third party module characterization and PVEIM 0.79%/yr power degradation (Campana, Z. et al. "SunPower Module Degradation Rates" SunPower white paper, 2013).
2 Based on search of datasheet values from websites of top 10 manufacturers per IHS, as of January 2017.
3 IHS iHS "Fourth-Party PV Durability Initiative for Solar Modules: Part 3: PV Tech Power Magazine, 2015; Campana, Z. et al. "SunPower Module Degradation Rates," SunPower white paper, 2013.
4 Factory sets 1547a-2014 default settings; CA Rule 21 default settings profile setting during commissioning. See the Equinox Installation Guide #E18101 for more information.
5 Standard Test Conditions (STC) 1000 W/m² irradiance, AM 1.5, 25°C, NREL calibration standard, 50 mA current, IEC 61215 and IEC 61216 test procedures apply to front and back of the module.
6 This product is UL listed as PVSE and conforms with NEC 2014 and NEC 2017 690.12; and CEC 2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors; when tested according to manufacturer's instructions.
See www.sunpower.com/facts for more reference information.
For more details, see extended datasheet www.sunpower.com/datasheet. Specifications listed within this datasheet are subject to change without notice.
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Warranties, Certifications, and Compliance	
Warranties	<ul style="list-style-type: none"> 25-year limited power warranty 25-year limited product warranty
Certifications	<ul style="list-style-type: none"> UL 1703 UL 1741 / IEEE 1547 UL 1741 AC Module (Type 2 fire rated) UL 62109-1 / IEC 62109-2
Compliance	<ul style="list-style-type: none"> IEC Part 15 Class B KCS 0003 Class B CAN/CSA C22.2 NO. 107.1-01 CA Rule 21 (UL 1741 S4)¹ (includes Volt/Var and Reactive Power Priority) UL Listed PV Rapid Shutdown Equipment²

Enables installation in accordance with:
 • NEC 690.6 (AC module)
 • NEC 690.12 Rapid Shutdown (inside and outside the array)
 • NEC 690.15 AC Connectors, 690.33(A)-(E) 1
 When used with InvisMount racking and InvisMount accessories (UL 2703):
 • Module grounding and bonding through InvisMount
 • Class A fire rated
 When used with AC module Q Cables and accessories (UL 6703 and UL 2238):
 • Rated for load break/disconnect
 PID Test Potential-induced degradation free



UL LISTED PVSE
 SUNPOWER®
 531946 RevA

Datasheet

sunpower.com

Solar Panel Information



SunPower® EnergyLink™ | Residential and Commercial PVS6

- Improve Support, Reduce Maintenance Costs**
An intuitive monitoring website enables you to:
- See a visual map of customer sites
 - Remotely manage hundreds of sites
 - Receive elective system reports
 - Locate system issues and remotely diagnose
 - Diagnose issues online
 - Drill down for the status of individual devices



Add Value for Customers

- With the SunPower Monitoring System customers can:
- See what their solar system produces each day, month, or year
 - Optimize their solar investment and save on energy expenses
 - See their energy use and estimated bill savings
 - See their solar system's performance using the SunPower monitoring website or mobile app



SunPower EnergyLink—Plug-and-Play Installation

- This complete solution for residential and commercial monitoring and control includes the SunPower® PV Supervisor 6 (PVS6) which improves the installation process, overall system reliability, and customer experience.
- Robust cloud connectivity and comprehensive local connectivity
 - Flexible configuration of devices during installation
 - Consumption metering
 - Revenue-grade production metering (pending)
 - Web-based commissioning
 - Remote diagnostics of PVS6 and inverters
 - Durable UL Type 3R enclosure reduces maintenance costs
 - Easy integration with SunPower eBOS



Robust Cloud Connectivity

- Multiple options to maintain optimal connectivity:
- Hardwired Ethernet
 - Wi-Fi
 - Cellular backup

SunPower® EnergyLink™ | Residential and Commercial PVS6



Site Requirements	
Number of SunPower AC modules supported per PVS6	85
Internet access	High-speed Internet access via accessible router or switch
Power	<ul style="list-style-type: none"> • 100-240 VAC (L-N), 50 or 60 Hz • 208 VAC (L-L, in 3-phase), 60 Hz

Operating Conditions	
Temperature	22°F to 114°F (-20°C to 40°C)
Humidity (maximum)	95% non-condensing

Mechanical	
Weight	5.5 lbs (2.5 kg)
Dimensions	11.8 x 8.0 x 4.2 in. (30.5 x 20.5 x 10.8 cm)
Enclosure rating	UL50C Type 3R

Communication	
RS-485	Inverters and meters
Integrated Metering	<ul style="list-style-type: none"> • One channel of revenue-grade production metering • Two channels of consumption metering
Ethernet	1 LAN (or optional WAN) port
PLC	PLC for SunPower AC modules
Wi-Fi	802.11b/g/n 2.4 GHz and 5 GHz
Cellular	LTE Cat-M1/3G UMTS
ZigBee	IEEE 802.15.4 MAC, 2.4GHz ISM band
Data Storage	60 days
Upgrades	Automatic firmware upgrades

Web and Mobile Device Support	
Customer site	monitor.us.sunpower.com
Partner site	psmgn.us.sunpower.com
Browsers	Firefox, Safari, and Chrome
Mobile devices	iPhone®, iPad®, and Android™
Customer app	<ol style="list-style-type: none"> 1. Create account online at: monitor.us.sunpower.com 2. On a mobile device, download the SunPower Monitoring app from Apple App Store® or Google Play™ store. 3. Sign in using account email and password.

Warranty and Certifications	
Warranty	10-year Limited Warranty
Certifications	UL, cUL, CE, UL 61010-1 and -2, FCC Part 15 (Class B)



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Datasheet



Solar Panel Information



Simple and Fast Installation

- Integrated module-to-rail grounding
- Pre-assembled mid and end clamps
- Levitating mid clamp for easy placement
- Mid clamp width facilitates consistent, even module spacing
- UL 2703 Listed integrated grounding

Flexible Design

- Addresses nearly all sloped residential roofs
- Design in landscape and portrait with up to 8' rail span
- Pre-drilled rails and rail splice
- Rails enable easy obstacle management

Customer-Preferred Aesthetics

- #1 module and #1 mounting aesthetics
- Best-in-class system aesthetics
- Premium, low-profile design
- Black anodized components
- Hidden mid clamps and capped, flush end clamps

Part of Superior System

- Built for use with SunPower DC and AC modules
- Best-in-class system reliability and aesthetics
- Optional rooftop transition flashing, rail-mounted J-box, and wire management rail clips
- Combine with SunPower modules and SunPower EnergyLink® monitoring app



Elegant Simplicity

SunPower® InvisiMount™ is a SunPower-designed rail-based mounting system. The InvisiMount system addresses residential sloped roofs and combines faster installation time, design flexibility, and superior aesthetics. The InvisiMount product was specifically envisioned and engineered to pair with SunPower modules. The resulting system-level approach amplifies the aesthetic and installation benefits—for homeowners and for installers.

5.24.21
F-17690

sunpower.com



Datasheet



InvisiMount Components



InvisiMount Component Details	
Mid clamp	Black oxide stainless steel 300 series 63 g (2.2 oz)
End clamp	Black anodized aluminum 6000 series 110 g (3.88 oz)
Rail	Black anodized aluminum 6000 series 830 g/m (5 oz/ft)
Rail splice	Aluminum alloy 6000 series 830 g/m (5 oz/ft)
Rail bolt	M 10-1.5 x 25 mm custom T-head SS304 18 g (0.63 oz)
Rail nut	M 10-1.5, DIN 6923 SS304 nominal
Ground lug assembly	SS304 A2-70 bolts on plated copper lug 106.5 g (3.75 oz)
Row-to-row grounding clip	SS 301 with SS 304 M6 bolts 75 g (2.6 oz)
Row-to-row spacer	Black POM-grate plastic 5 g (0.18 oz)

InvisiMount Operating Conditions	
Temperature	-40° C to 90° C (-40° F to 194° F)
Max. load (LRFD)	• 3000 Pa up/ft • 6000 Pa down/force

Roof Attachment Hardware Supported by Design Tool	
Application	• Composition Single Rafter Attachment • Composition Single Roof Decking Attachment • Curved and Flat Tile Roof Attachment • Universal Interface for other roof attachments

InvisiMount Warranties And Certifications	
Warranties	• 25-year product warranty • 5-year finish warranty
Certifications	• UL 2703 Listed • Class A Fire Rated

Roof Attachment Hardware Warranties	
	Refer to roof attachment hardware manufacturer's documentation.

¹ Module frame that is compatible with the InvisiMount system required for hardware interoperability.
² SunPower recommends that all square™, InvisiMount™, and AC module systems always be designed using the InvisiMount Span Table #C2470A. If a designer decides to rebase to use the component capacities listed in the document to design a system, note that the capacities shown are for use and designed for use by Design (RED) design tools, and are NOT to be used for Allowable Stress Design (ASD) calculations, and/or a Licensed Professional Engineer (PE) must then do manual calculations. If you have any questions please contact SunPower Technical Support at 1-855-975-7867.
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Datasheet

