APPLICATION FOR BUILDING PERMIT

The Village of Irvington | 85 Main St | Irvington NY 10533

Application Number:	994	Date:	12/19/2022
Job Location:	21 S COTTINET ST	Parcel ID:	2.80-31-17
Property Owner:	Cossins, John	Property Class:	1 FAMILY RES
Occupancy:	One/ Two Family	Zoning:	
Common Name:	21 S COTTENET ST		

Applicant	**Contractor**
Emily Quiroa	Emily Quiroa
SunPower Corporation	SunPower Corporation
400 Executive Blvd. STE 137Elmsford NY 10523	400 Executive Blvd. STE 137 Elmsford NY 10523
9144380360	9144380360

Description of Work

Type of Work:	Solar Panels	Applicant is:	Contractor
Work Requested by:	The Owner	In association with:	
Cost of Work (Est.):	20000.00	Property Class:	1 FAMILY RES

Description of Work

Installation of a 8.20kW Grid Tied Roof Mounted Solar System. Installing a total of 20 solar panels.

Please Note: Completing the application does not constitute a permit to commence construction. To obtain your permit follow the instructions on the instruction page provided on page 3.

Job Location: 21 S COTTINET ST Parcel Id: 2.80-31-17

AFFIDAVIT OF APPLICANT

I Emily Quiroa being duly sworn, depose and says: That s/he does business as: SunPower Corporation with offices at: 400 Executive Blvd. STE 137 Elmsford NY 10523 and that s/he is:

☐ The owner of the property described herein.
☒ The Permit Coordinator of the New York Corporation SunPower Corp. with offices at: 400 Executive Blvd STE 137 Elmsford NY 10523 duly authorized by resolution of the Board of Directors, and that said corporation is duly authorized by the owner to make this application.

☐ A general partner of _____ with offices _____ and that said Partnership is duly authorized by the Owner to make this application.
☐ The Lessee of the premises, duly authorized by the owner to make this application.
☐ The Architect of Engineer duly authorized by the owner to make this application.
☐ The contractor authorized by the owner to make this application.

That the information contained in this application and on the accompanying drawings is true to the best of his knowledge and belief. The undersigned hereby agrees to comply with all the requirements of the New York State Uniform Fire Prevention and Building Code, the Village of Irvington Building Code, Zoning Ordinance and all other laws pertaining to same, in the construction applied for, whether or not shown on plans or specify in this application.

Sworn to before me this 20th day of December of 2022

Notary Public / Commission of Deeds

Melissa Ann Mitchell
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 01MI6420346
Qualified in Westchester County
Commission Expires August 2, 2025

EQUIROA

Applicant's Signature

OWNER'S AUTHORIZATION

I Cossins, John as the owner of the subject premises and have authorized the contractor named above to perform the work under the subject application.

Owner phone number _____ Owner email address _____

☐ _____ I hereby acknowledge that it is my responsibility as the **property owner** to ensure that if the permit (if issued) receives a Final Certificate of Approval from the Building Department and further that if a Final Certificate of Approval is not obtained upon completion of the construction, a property violation may be placed on the property for which this permit is being requested.

Sworn to before me this _____ day of _____ of _____

Notary Public / Commission of Deeds

Applicant's Signature

See Proxy Statement

VILLAGE OF IRVINGTON
BUILDING DEPARTMENT
85 MAIN STREET
IRVINGTON, NEW YORK 10533
TEL: (914) 591-8335 • FAX: (914) 591-5870
WWW.IRVINGTONNY.GOV

Proxy Statement

John Cossins is the owner of the property located at 21 S. Cottenet St. and has authorized SunPower Corporation to make the attached building permit application for Roof Mounted Solar Panels.

X _____

Signature of Owner

NOTARY:

Sworn to before me
this 14th day of December 2024

Notary Public: _____

EMILY QUIROA
Notary Public – State of New York
No.01QU6350827
Qualified in Bronx County
My Commission Expires 11/21/2020

EMILY QUIROA
Notary Public – State of New York
No.01QU6350827
Qualified in Bronx County
My Commission Expires 11/21/2020

VILLAGE OF IRVINGTON
BUILDING DEPARTMENT
85 MAIN STREET
IRVINGTON, NEW YORK 10533
TEL: (914) 591-8335 • FAX: (914) 591-5870
Web Site: www.Irvingtonny.gov

LICENSED PROFESSIONAL AFFIDAVIT for RESIDENTIAL SOLAR SYSTEMS

TO BE SUBMITTED AS PART OF THE PERMIT APPLICATION

AFFIDAVIT OF ARCHITECT OR ENGINEER

State of New York } ss.:
County of Westchester }

I the undersigned, under penalty of perjury, do hereby affirm:

1. I am an the (architect)(engineer) duly licensed in the State of New York

2. I am the NYS licensed design professional named in the Application for which a Building Permit for a residential solar system located at 21 S. Cottenet St., Irvington, New York 10533.

3. I have inspected the existing building and structure and find that the existing structure with the proposed solar panel installation and connections to the existing roof meet the minimum criteria set forth in;
   Applicable Codes: 2015 Residential Code of New York State
   Design Roof Load: 30 psf live load, 115 psf dead load, 45 psf total load
   Design Wind Load: 120 mph, 35psf
   OR have proposed additional measures to insure compliance with above.

4. I have reviewed the following submitted drawings and/or manufacture specifications as part of the submission
   List applicable plans with revision dates:
   SHEET PVA-0 (rev date) 08/17/2022
   SHEET PVA-1 (rev date) 08/17/2022
   SHEET PVS-1 (rev date) 08/17/2022
   _____ (rev date) _____
   _____ (rev date) _____
   _____ (rev date) _____

5. The plans, drawings and specifications which the Building Permit is requested and listed above, as submitted (a)-were prepared by me or under my supervision, and (b)-to the best of my knowledge comply with the requirements of the Residential Building Code of New York State as adopted by the Village of Irvington, applicable design loads and all other applicable laws, rules and regulations governing building construction.

Signature PAYMON ESKANDANIAN

(Architect) (Engineer)

Sworn to before me this
14th day of December, 2022

Notary Public

EMILY QUIROA
Notary Public – State of New York
No.01QU6350827
Qualified in Bronx County
My Commission Expires 11/21/2020
2024

VILLAGE OF IRVINGTON
BUILDING DEPARTMENT
85 MAIN STREET
IRVINGTON, NEW YORK 10533
TEL: (914) 591-8335 • FAX: (914) 591-5870

_____ 18) Separate Electrical Permit application by a Westchester County Department of Licensing, licensed Electrician with required insurances and the appropriate fee (must be filed by the licensed contractor, see village application for further details).
_____ 19) Submit signed check list with submission and appropriate building permit fee.
_____ 20) Applicant has provided seven copies of the entire submittal for Architectural Review Board approval.

Applicant Affidavit:
Applicants Name: Emily Quiroa
Applicants Address: 400 Executive Blvd STE137
Elmsford, NY, 10523
Applicants Phone # (914) 458-0360
Applicants Email emily.quiroa@sunpowercorp.com

Applicant Name: Emily Quiroa **Signature:** EQuiroa **Date:** 12/12/22 **By signing this affidavit I attest to have read the attached Solar Energy Equipment Code and the Solar Equipment Guidelines manufactures installation instructions and that all information asked for above has been submitted and that the submitted information is correct.**

General Contractor Affidavit:
Contractors Name: SunPower Corporation
Contractors Address: 400 Executive Blvd Ste137
Elmsford, NY 10523
Contractors Phone # (914) 458-0360
Contractors Email emily.quiroa@sunpowercorp.com

General Contractor Name: Nick Glogowski **Signature:** _____ **Date:** 12/12/22 **By signing this affidavit I attest to being the general contractor of record for this application and will be responsible for oversite and direct supervision of same, and will maintain a valid Westchester County Department of Consumer Protection License, a valid for Workers Compensation Policy and a General Liability Policy listing the Village of Irvington as Certificate Holder and additional insured with no conditions until such time I apply for and receive a Certificate of Completion.**

Electrical Contractor Affidavit:
Electrical Contractors Name: Ryan Franzo
Electrical Contractors Address: 400 Executive Blvd Ste137
Elmsford, NY 10523
Electrical Contractors Phone # (914) 458-0360
Electrical Contractors Email emily.quiroa@sunpowercorp.com

Electrical Contractor Name: Ryan Franzo **Signature:** _____ **Date:** 12/12/22 **By signing this affidavit I attest to being the electrical contractor of record for this application and will be responsible for oversite and direct supervision of same, and will maintain a valid Westchester County Electrical License, a valid for Workers Compensation Policy and a General Liability Policy listing the Village of Irvington as Certificate Holder and additional insured with no conditions until such time I apply for and receive a Certificate of Completion.**

Note: Applications for all exterior elevation changes including photovoltaic solar systems are required to apply for, make a presentation in front of, and receive approval from the Village of Irvington Architectural Review Board (ARB) prior to issuance of a building permit. The ARB meetings are the second and fourth Mondays of the month, with a deadline for submissions one week prior to the meetings (see village web site for confirmation of meetings). Seven sets of copies of the entire application are required to be submitted at the deadline with appropriate fee at the time of submission.

Note: The following list above is given to assist in the application process. It is not intended to be a replacement for the Building or Zoning Code, County or State Regulations, or Consolidate Edison Requirements. Unique and Special projects may require additional information.

Hours of Construction: Monday-Friday 7AM-7PM; Saturday 9AM-5PM; Sunday and holiday's construction is prohibited
Only completed applications will be accepted with attached insurance certificates and County license

NOTICE OF APPLICATION AND HEARING

Board of Architectural Review
Clerk's Office
Village of Irvington
Westchester County, New York

CERTIFIED MAIL

Date of Mailing _____

NOTICE:
Pursuant to 9-12 of the code of the Village of Irvington notice to adjacent neighbors (as defined below) is required 10 days prior a meeting where an application for Solar Panels to the Village of Irvington Architectural Board is asking to be heard.

Date of Meeting: 1/23/22
Time of Meeting: Meeting starts at 8pm
Location of Meeting: Trustees Meeting Room
85 Main St. Irvington, NY 10533

Applicant Name	SunPower Corporation	Owners Name	John Cossins
Applicant Mailing Address	409 Executive Blvd Ste 137 Elmsford, NY 10523	Owner Mailing Address	21 S. Cottenet St. Irvington, NY 10533
Applicant Phone Number	(914) 438-0360	Owners Phone Number	(512) 221-7561
Applicant Email Address	emily.quiroz@sunpowercorp.com	Owners Email Address	jwcinse@gmail.com

Address of Proposed Solar Panels:
Street Address 21 S. Cottenet St, Irvington, NY 10533

To Adjacent Neighbors of: 19 SCS LLC
Shirley Murinilli

Please take notice that the applicant named above is requesting the Board of Architectural Review of the Village of Irvington to grant a permit for the installation of **Solar Energy Equipment** to the address listed above.
Plans of the proposed work are available in the office of the Irvington Building Department for public inspection during regular business hours 5 days prior to the scheduled meeting.

9-12. Solar Energy Equipment.
For any application for a building permit for solar energy equipment, written notice of the application and the date, time and place of the meeting at which it will be considered must be given to all adjacent property owners not less than 10 days prior to the meeting date. Notice shall be by a method of mail or a delivery service company providing proof of mailing or delivery or by personal service of such notice on the property owners, evidenced by their signature as acknowledgment of receipt of such notice on a form supplied or similar to one supplied by the Village Clerk. Proof of service of the notice shall be filed prior to or at the meeting at which the application is considered.*
("Adjacent property" refers to any neighbor that shares a property line with the subject property as well as neighbors across any street from the subject property.)

7021 2720 0000 3332 4947

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

Irvington, NY 10533

OFFICIAL USE

Certified Mail Fee	$4.00
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$1.20
Total Postage and Fees	$5.20

0031 10
JAN 05 2023
Postmark Here
10523 USPS
ELMSFORD NY
01/05/2023

Sent To

Street and Apt. No., or PO Box No. 28 S. Cottenet St.

City, State, ZIP+4 Irvington, NY 10533

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7021 2720 0000 3332 4923

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

Irvington, NY 10533

OFFICIAL USE

Certified Mail Fee	$4.00
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$1.20
Total Postage and Fees	$5.20

0031 10
JAN 05 2023
Postmark Here
10523 USPS
ELMSFORD NY
01/05/2023

Sent To

Street and Apt. No., or PO Box No. 19 S. Cottenet St.

City, State, ZIP+4 Irvington, NY 10533

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7021 2720 0000 3332 4930

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

Irvington, NY 10533

OFFICIAL USE

Certified Mail Fee	$4.00
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$1.20
Total Postage and Fees	$5.20

0031 10
JAN 05 2023
Postmark Here
10523 USPS
ELMSFORD NY
01/05/2023

Sent To

Street and Apt. No., or PO Box No. 22 S. Dutcher St.

City, State, ZIP+4 Irvington, NY 10533

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7021 2720 0000 3332 4916

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

Irvington, NY 10533

OFFICIAL USE

Certified Mail Fee	$4.00
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$1.20
Total Postage and Fees	$5.20

0031 10
JAN 0 9 2023
Postmark Here
10523 USPS
ELMSFORD NY
01/05/2023

Sent To

Street and Apt. No., or PO Box No. 23 S. Cottenet St.

City, State, ZIP+4 Irvington, NY 10533

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

PAYMON ESKANDANIAN, P.E.

28202 Cabot Rd, Ste 300, Laguna Niguel, CA 92677
info@lagunaengineers.com

Project:	**Cossins Residence**
Location:	**Irvington, NY**
Date:	**8/18/2022**

STRUCTURAL CERTIFICATION LETTER

August 18, 2022

To: Sunpower Corporation
1414 Harbour Way
South Richmond, CA 94804

Project: Cossins Residence
21 S Cottenet St
Irvington, NY 10533

To Whom It May Concern:

A jobsite observation of the condition of the existing framing system was performed by an audit team of Sunpower Corporation as a request from Laguna Consulting Engineers. All review is based on these observations and the design criteria listed below and only deemed valid if the provided information is true and accurate.

The scope of this report is strictly limited to an evaluation of the fastener attachment, underlying framing and supporting structure only. The design of racking (rail spans, mounting hardware, etc.), PV panels and all other structure is by others and shall be per the specified design criteria. Laguna Consulting Engineers assumes no responsibility for improper installation of PV panels, racking, or waterproofing. Prior to starting construction, contractor shall verify the framing sizes, spacings, and spans noted in the stamped plans and this letter and notify the Engineer of Record of any discrepancies noted. This review relies on the roof's structural system having been originally designed and constructed in accordance with the building code requirements and having been maintained to be in good condition.

DESIGN CRITERIA:

Applicable Codes: 2020 New York State Building/Residential Code, ASCE 7-16
Risk/ Occupancy Category: II
Roof Dead Load(s): 9 psf, Comp Shingles (ROOF 1 - 2)
Roof Live Load(s): 20 psf, 0 psf Under PV
Ground Snow Load: 30 psf , Roof Snow Load: 21 psf (ROOF 1 - 2)
Basic Wind Speed: 115 mph, Exposure Category: C

DESCRIPTION OF EXISTING ROOF STRUCTURE:

ROOF 1 - 2: 2x8 Rafters @ 16" o.c. with a maximum unsupported horizontal span of 15'-6" and a slope of 20.5 degrees

CONCLUSIONS:

ROOF 1 - 2: Adequate to support the imposed loading - No structural upgrades required

Max PV mount spacing- Landscape config: 48", Portrait config: 48", Pattern: Staggered (ROOF 1 - 2)

Attachment to Framing: 1 - 5/16" Lag Screw(s) w/ 2.5" min embed @ above spacing (ALL ROOFS)

Please contact me should you have any questions or comments regarding this project.

Paymon Eskandanian, SE, PE
Laguna Consulting Engineers

PAYMON ESKANDANIAN, P.E.

28202 Cabot Rd, Ste 300, Laguna Niguel, CA 92677
info@lagunaengineers.com

Project:	**Cossins Residence**
Location:	**Irvington, NY**
Date:	**8/18/2022**

GRAVITY LOADS (ROOF 1 - 2)

1. NEW PV SYSTEM DEAD LOAD	ITEM	LOAD	
	(N) PV SYSTEM DEAD LOAD, DL_{PV-N} =	**3**	psf

Note: PV System Weight Provided by Client/ Manuf.

2. ROOF DEAD LOAD	ITEM	LOAD		ASCE Ch-3
	Comp Shingles	4	psf	
	Plywood Deck	2	psf	
	2x8 Rafters @ 16" O.C.	2.27	psf	
	Vaulted Ceiling	0	psf	
	Miscellaneous	0.73	psf	
	ROOF DEAD LOAD, DL_{ROOF} =	**9**	psf	

3. ROOF LIVE LOAD	ITEM	VALUE		ASCE Ch-4
	Roof Live Load, L_0 =	20	psf	
	Tributary Area Supported By Member, A_T =	≤ 200	sq.ft	
	Tributary Area Reduction Factor, R_1 =	1		
	Roof Slope =	5/12	(20.5 Deg.)	
	Slope Reduction Factor, R_2 =	1.00		
	ROOF LIVE LOAD, $LL_{ROOF} = L_0 . R_1 . R_2$ =	**20**	psf	

Note: Live Load Under PV Arrays = 0 PSF.

4. ROOF SNOW LOAD	ITEM	VALUE		ASCE Ch-7
	Ground Snow Load, p_g =	**30**	psf	
	Exposure Factor (Fully Exposed), C_e =	1		Table 7.3-1
	Thermal Factor (Cold Roof), C_t =	1		Table 7.3-1
	Snow Importance Factor, I_s =	1		
	Minimum Low-Slope Roof Snow Load, p_{LS_min} =	N/A	psf	
	Minimum Flat Roof Snow Load (AHJ), $p_{f\_min\_AHJ}$ =	N/A	psf	
	Flat Roof Snow Load, $p_f = 0.7C_eC_tI_sp_g + p_{f\_sur}$; $p_f \geq p_{f\_min\_AHJ}$ → p_f =	**21.0**	psf	Eqn 7.3-1
	Roof Slope =	5/12	(20.5 Deg.)	
	Surface Type =	All Other Surfaces		
	Slope Factor, C_s =	1.00		
	ROOF SNOW LOAD, $p_s = C_s . p_f$ =	**21.0**	psf	Eqn 7.4-1

PAYMON ESKANDANIAN, P.E.

28202 Cabot Rd, Ste 300, Laguna Niguel, CA 92677
info@lagunaengineers.com

Project:	**Cossins Residence**
Location:	**Irvington, NY**
Date:	**8/18/2022**

WIND LOADS (ROOF 1 - 2)

Wind loads on standoffs and their attachment to the underlying structure are determined as per the requirements for rooftop solar panels parallel to the roof surface (ASCE 7-16, Section 29.4.4).

Risk Category	=	II		
Basic Wind Speed, V (ULT)	=	115	mph	
Wind Directionality Factor, K_d	=	0.85		Table 26.6-1
Exposure Category	=	C		
Topographic Factor, Kz_t	=	1.0		Table 26.8-1
Ground Elevation Factor, K_e	=	1.0		Table 26.9-1
Mean Roof Height, h	=	25	ft (Max)	
Velocity Pressure Exposure Coefficient, K_z	=	0.95		Table 26.10-1
Velocity Pressure, $q_h = 0.00256K_zK_{zt}K_dK_eV^2$	=	27.22	psf (ULT)	Eq. 26.10-1
q_h_ASD = 0.6 x q_h_ULT	=	16.33	psf	
Roof Type	=	Gabled		
Roof Slope	=	20.5	Degrees	
γ_E	=	1.0		29.4-4
Effective Wind Area, A_{eff}	=	See Table Below		26.2
Design Wind Pressures (ASD), $p_{UPLIFT\ (ASD)}$	=	$q_{h\ (ASD)} . (GC_p) . \gamma_E . \gamma_a$; p_{ASD_MIN} = 10 psf		Eq. 29.4-7
Standoff Net Uplift Forces, $P_{Uplift\ (ASD)}$ (lbs)	=	$p_{WIND\ ASD}$ x A_{trib} - 0.6P_{DL} (See Table Below)		

PRESSURES	**UPLIFT**						**DOWNWARD**
Panel Configuration	**PORTRAIT**			**LANDSCAPE**			**ALL**
ZONE	ZONE 1 (Interior)	ZONE 2 (Edge)	ZONE 3 (Corner)	ZONE 1 (Interior)	ZONE 2 (Edge)	ZONE 3 (Corner)	ALL ZONES
γ_A	0.75	0.75	0.80	0.80	0.80	0.80	0.80
GC_p	-1.50	-2.35	-3.01	-1.50	-2.50	-3.52	0.58
Design Wind Pressures (ASD), $p_{UPLIFT\ (ASD)}$ (psf)	**-18.3**	**-28.6**	**-39.4**	**-19.6**	**-32.7**	**-45.9**	**10.0**
Standoff X-Spacing (in)	48.00	48.00	32.00	48.00	48.00	32.00	48.00
Trib. Width (ft)	3.41	3.41	3.41	1.69	1.69	1.69	3.41
Trib. Area, A_{Trib} (ft^2)	13.65	13.65	9.10	6.76	6.76	4.51	13.65
Standoff Net Uplift Forces, $P_{Uplift\ (ASD)}$ (lbs)	**-225**	**-366**	**-342**	**-120**	**-209**	**-199**	**161**

ROOF ATTACHMENT CHECKS

Max Standoff Uplift (ASD) =	**366**	lbs
Mount Allowable Uplift =	450	lbs (Per Manuf.)
Standoff Demand/Capacity Ratio, DCR =	**81% < 100%, Therefore O.K.**	
Fastener Size and Type =	5/16"	Lag Screw(s)
No. of Fasteners per Standoff, N =	1	
Min Fastener Embed Into Framing, T =	2.5	in
Fastener Allowable Pullout Per Inch, W =	246	lb/in
Additional Factor of Safety, F.S =	1.5	
Fastener Group Allowable Pullout Capacity, T_{ALL} = (N x W x T x LDF = 1.6) / (F.S.) =	**656**	lbs
Fastener Demand/Capacity Ratio, DCR =	**56% < 100%, Therefore O.K.**	

PAYMON ESKANDANIAN, P.E.

28202 Cabot Rd, Ste 300, Laguna Niguel, CA 92677
info@lagunaengineers.com

Project:	**Cossins Residence**
Location:	**Irvington, NY**
Date:	**8/18/2022**

MEMBER CHECKS (ROOF 1 - 2) PASS

1. (E) WOOD ROOF CONSTRUCTION:

ROOF SLOPE	=	**20.5°**	
FRAMING TYPE	=	**Rafters**	
WOOD SPECIES & GRADE	=	**DF #2**	
RAFTER OR TRUSS TOP CHORD SIZE	=	**2x8**	**(S =13.14 in^3 ; I = 47.63 in^4)**
RAFTER OR TRUSS SPACING	=	**16" o.c.**	
MEMBER HORIZONTAL SPAN, L	=	**15'-6"**	

2. MEMBER LOADING:

LOAD TYPE	UNIFORM LOAD (PSF)	U.L. PROJECTION OVER HORIZ. SPAN (PSF)	MEMBER DESIGN LOAD (PLF)
ROOF DEAD LOAD	9.0	9.6	12.8
PV DEAD LOAD	3.0	3.2	4.3
ROOF LIVE LOAD*	0.0	0.0	0.0
ROOF SNOW LOAD	21.0	21.0	28.0
* RLL = 0 PSF UNDER PV		GOVERNING LOAD CASE =	**DL + PV + SL**
		TOTAL LOAD, W_{TL} =	**45 plf**

3. BENDING CHECKS:

REFERENCE DESIGN BENDING STRESS, F_b	=	**900**	psi	
LOAD DURATION FACTOR, C_d	=	**1.15**		
SIZE FACTOR, C_F	=	**1.20**		
REPETITIVE MEMBER FACTOR, C_r	=	**1.15**		
ALLOWABLE BENDING STRESS, $F'_b = F_b \times C_d \times C_f \times C_r$	=	**1,428**	psi	
MEMBER BENDING STRESS, $f_b = M_{max} / S$	=	**1,236**	psi	
BENDING DEMAND-CAPACITY RATIO = f_b / F'_b	=	**87%**	**< 100%**	**BENDING O.K.**

4. SHEAR CHECKS:

REFERENCE DESIGN SHEAR STRESS, F_v	=	**180**	psi	
LOAD DURATION FACTOR, C_d	=	**1.15**		
ALLOWABLE SHEAR STRESS, $F'_v = F_v \times C_d$	=	**207**	psi	
MAX SHEAR, $V_{max} = W_{TL} \cdot L / 2$	=	**349**	lbs	
MEMBER AREA, A	=	**10.88**	in^2	
MEMBER SHEAR STRESS, $f_v = V_{max} / A$	=	**32.1**	psi	
SHEAR DEMAND-CAPACITY RATIO = f_v / F'_v	=	**16%**	**< 100%**	**SHEAR O.K.**

5. DEFLECTION CHECKS:

ALLOWABLE DEFLECTION (TOTAL LOAD), Δ_{ALL-TL}	=	**(L/180)**	E =	**1,600,000 psi**
	=	**1.033 in**	SPAN TYPE =	**Simple Span**
MAX DEFLECTION (TOTAL LOAD), Δ_{MAX-TL}	=	**5 WL^4/384EI**		
	=	**0.768 in**	**(L/242)**	
Δ_{MAX-TL}	<	Δ_{ALL-LL}		**TOTAL LOAD DEFLECTION O.K.**
ALLOWABLE DEFLECTION (LIVE/SNOW), $\Delta_{ALL-LL/SL}$	=	**(L/240)**		
	=	**0.775 in**		
MAX DEFLECTION (LIVE/SNOW LOAD), $\Delta_{MAX-LL/SL}$	=	**5 WL^4/384EI**		
	=	**0.477 in**	**(L/390)**	
Δ_{MAX-LL}	<	Δ_{ALL-LL}		**LIVE LOAD DEFLECTION O.K.**


NOTICE


NOTICE


S Cottage


© 2022 Google

S Cottenet St
S Cottenet St
21 S Cottenet St,
NY 10533

George Latimer
Westchester County Executive

Westchester gov.com

James Maisano
Director, Consumer Protection

Department of Consumer Protection
Home Improvement License

SUNPOWER CORPORATION, SYSTEMS

1414 HARBOUR WAY - #1901

RICHMOND,CA-94804

This license is issued in accordance with Article XVI of the Westchester County Consumer Protection Code and is valid only upon presence of the official department seal. Proof of citizenship or immigration status is not required for issuance of this license.
NOT FOR FEDERAL PURPOSES

License Number

WC-31975-H19

Department of Consumer Protection · Westchester County · NY

Date of Expiration

06/27/2023

LITHO IN U.S.A.

Westchester gov.com

George Latimer
Westchester County Executive

WESTCHESTER COUNTY DEPARTMENT OF CONSUMER PROTECTION

WESTCHESTER COUNTY ELECTRICAL LICENSING BOARD

RYAN FRANZO
SUNPOWER CORPORATION SYSTEMS
1414 HARBOUR WAY S, SUITE 1901
RICHMOND, CA 94804

Hereby maintains an active **Master Electrician License** in accordance with the Westchester County Electrical License Law and the Rules and Regulations of the Electrical Licensing Board. This license shall remain valid unless modified, suspended or revoked prior to the expiration date below.

License Number: **1983**

License Expires: **12/31/2023**

Certificate Issued: **11/10/2022**

PEC2000140

Department of Consumer Protection Westchester County NY

LITHO IN U.S.A.

NEW YORK STATE | Workers' Compensation Board

CERTIFICATE OF NYS WORKERS' COMPENSATION INSURANCE COVERAGE

1a. Legal Name and address of Insured (use street address only) SUNPOWER CORPORATION, SYSTEMS 1414 HARBOUR WAY SOUTH #1901 RICHMOND CA 94804 Work Location of Insured *(Only required if coverage is specifically limited to certain locations in New York State, i.e., a Wrap-Up Policy)*	1b. Business Telephone Number of Insured 888-249-8550 1c. NYS Unemployment Insurance Employer Registration Number of Insured 1d. Federal Employer Identification Number of Insured or Social Security Number 94-3008969
2. Name and Address of the Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder) IRVINGTON VILLAGE BUILDING DEPARTMENT 84 MAIN ST IRVINGTON, NY 10533	3a. Name of Insurance Carrier HARTFORD ACCIDENT AND INDEMNITY COMP 3b. Policy Number of Entity Listed in Box "1a": 57 WV WQ0015 3c. Policy effective period: 04/01/22 to 04/01/23 3d. The Proprietor, Partners or Executive Officers are [X] included. (Only check box if all partners/officers included) [ ] all excluded or certain partners/officers excluded.

This certifies that the insurance carrier indicated above in box "3" insures the business referenced above in box "1a" for workers' compensation under the New York State Workers' Compensation Law. **(To use this form, New York (NY) must be listed under Item 3A on the INFORMATION PAGE of the workers' compensation insurance policy).** The Insurance Carrier or its licensed agent will send this Certificate of Insurance to the entity listed above as the certificate holder in box "2".

The insurance carrier must notify the above certificate holder and the Workers' Compensation Board within 10 days IF a policy is canceled due to nonpayment of premiums or within 30 days IF there are reasons other than nonpayment of premiums that cancel the policy or eliminate the insured from the coverage indicated on this Certificate. (These notices may be sent by regular mail.) **Otherwise, this Certificate is valid for one year after this form is approved by the insurance carrier or its licensed agent, or until the policy expiration date listed in box "3c", whichever is earlier.**

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policy listed, nor does it confer any rights or responsibilities beyond those contained in the referenced policy.

This certificate may be used as evidence of a Worker's Compensation contract of insurance only while the underlying policy is in effect.

Please Note: Upon cancellation of the workers' compensation policy indicated on this form, if the business continues to be named on a permit, license or contract issued by a certificate holder, the business must provide that certificate holder with a new Certificate of Workers' Compensation Coverage or other authorized proof that the business is complying with the mandatory coverage requirements of the New York State Workers' Compensation Law.

Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has the coverage as depicted on this form.

Approved by: Danielle Clausen
(print name of authorized representative or licensed agent of insurance carrier)

Approved by: Danielle Clausen 03/04/2022
(Signature) (Date)

Title: Operations Manager

Telephone Number of authorized representative or licensed agent of insurance carrier: (877) 853-2582

Please Note: Only insurance carriers and their licensed agents are authorized to issue Form C-105.2. Insurance brokers are NOT authorized to issue it.

Workers' Compensation Law

Section 57. Restriction on issue of permits and the entering into contracts unless compensation is secured.

1. The head of a state or municipal department, board, commission or office authorized or required by law to issue any permit for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, and notwithstanding any general or special statute requiring or authorizing the issue of such permits, shall not issue such permit unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter. Nothing herein, however, shall be construed as creating any liability on the part of such state or municipal department, board, commission or office to pay any compensation to any such employee if so employed.

2. The head of a state or municipal department, board, commission or office authorized or required by law to enter into any contract for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, notwithstanding any general or special statute requiring or authorizing any such contract, shall not enter into any such contract unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter.

SOLAR INDIVIDUAL PERMIT PACKAGE

JOHN COSSINS

8.20 kW GRID TIED PHOTOVOLTAIC SYSTEM

(512) 221-7561
21 S COTTENET ST PD
IRVINGTON NY 10533-1602

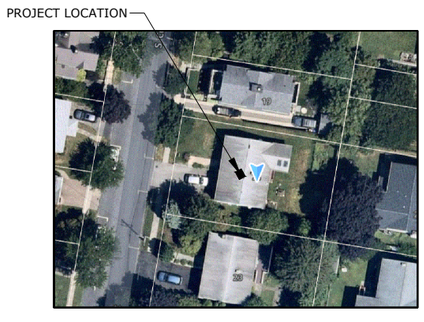
AHJ: IRVINGTON VILLAGE
UTILITY: CONSOLIDATED EDISON CO-NY INC

CODE INFORMATION

APPLICABLE CODES, LAWS AND REGULATIONS

2020 RESIDENTIAL CODE OF NEW YORK STATE (RCNYS)
2020 BUILDING CODE OF NEW YORK STATE (BCNYS)
2020 PLUMBING CODE OF NEW YORK STATE (PCNYS)
2020 MECHANICAL CODE OF NEW YORK STATE (MCNYS)
2020 FUEL GAS CODE OF NEW YORK STATE (FGCNYS)
2020 FIRE CODE OF NEW YORK STATE (FCNYS)
2020 PROPERTY MAINTENANCE CODE OF NEW YORK STATE (PMCNYS)
2020 EXISTING BUILDING CODE OF NEW YORK STATE (EBCNYS)
2020 ENERGY CONSERVATION CODE OF NEW YORK STATE (ECCNYS)
2017 NATIONAL ELECTRIC CODE (NEC)CODEINFORMATION

SATELLITE IMAGE



JOB NOTES

SCOPE OF WORK

- (N) 8.200 KW PHOTOVOLTAIC SYSTEM
- (20) 410W (Model SPR-M-410-BLK-H-AC) PV MODULES
- POINT OF INTERCONNECTION AT MAIN SERVICE PANEL WITH CIRCUIT BREAKER

SHEET INDEX

SUNPOWER®
CORPORATION, SYSTEMS
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804
(510) 540-0550

SPRI - NEW YORK
777 WESTCHESTER AVE.
WHITE PLAINS, NY 10604

(FOR STRUCTURAL)

STATE OF NEW YORK
PAYMON ESKANDANIAN
EXCELSIOR
95481
LICENSED PROFESSIONAL ENGINEER

JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

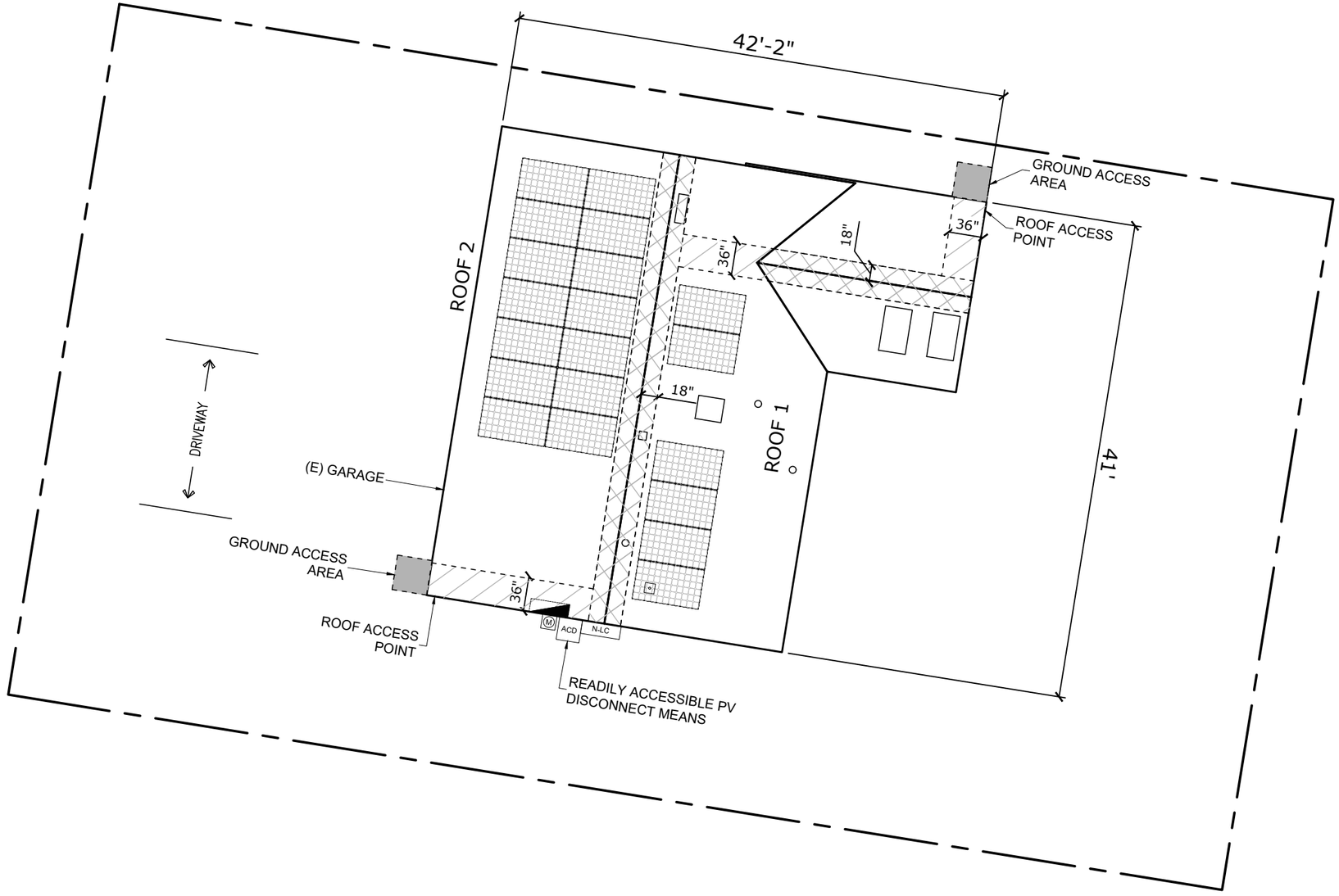
SOLAR INDIVIDUAL PERMIT PACKAGE
COVER SHEET

REVISIONS

REV	DESCRIPTION	DATE	DB

DRAWN BY:
PKatigbak
PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	NTS
SHEET	PVA-0



LEGEND

	JUNCTION BOX
	CONDUIT
	MAIN SERVICE PANEL
M	UTILITY METER
	PROPERTY LINE
	18" MIN VENT AREA
	36" MIN ROOF ACCESS
	36" GROUND ACCESS AREA
N-LC	NEW LOAD CENTER
ACD	AC DISCONNECT

TOTAL ROOF AREA: 1567 SQ. FT.
TOTAL ARRAY AREA: 424 SQ. FT.
TOTAL PERCENTAGE OF ROOF COVERED BY SOLAR: 27%

NOTE:
1. FIELD ADJUSTMENTS OF FEWER THAN 6" MAY BE ALLOWED BASED ON SITE CONDITIONS AND MEASUREMENTS.

ROOF	1	2				
MODULE QTY.	6	14				
AZIMUTH	99°	279°				
PITCH	4.5:12	4.5:12				
ROOF AREA (ft^2)	617	684				

UTILITY ACCOUNT	51-1701-5525-0002-2
CONTRACT MODULE & QUANTITY	20 SPR-M410-BLK-H-AC (240)
MICROINVERTER TYPE & QUANTITY	20 IQ7HS-66-ACM-US (240)
ROOF TYPE	COMP SHINGLE
ROOF ATTACHMENT QUANTITY	42
STORY HOME TYPE	2 - STORY
TOTAL ARRAY AREA	424 SQ.FT.

SUNPOWER®
CORPORATION, SYSTEMS
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804
(510) 540-0550

SPRI - NEW YORK
777 WESTCHESTER AVE.
WHITE PLAINS, NY 10604

(FOR STRUCTURAL)

STATE OF NEW YORK
PAYMON ESKANDANIAN
EXCELSIOR
95481
LICENSED PROFESSIONAL ENGINEER

JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE
ARRAY LAYOUT

REVISIONS

REV	DESCRIPTION	DATE	DB

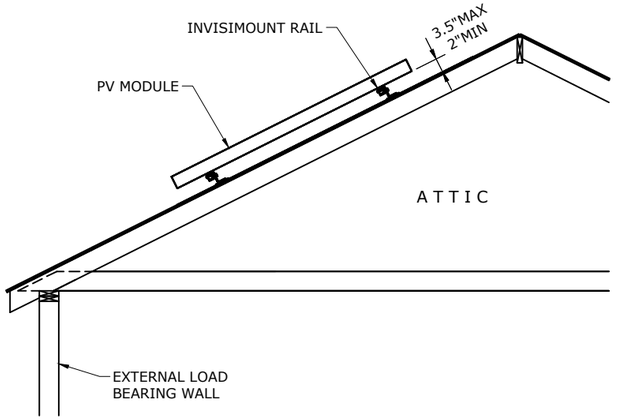
DRAWN BY:
PKatigbak
PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	3/32" = 1'-0"

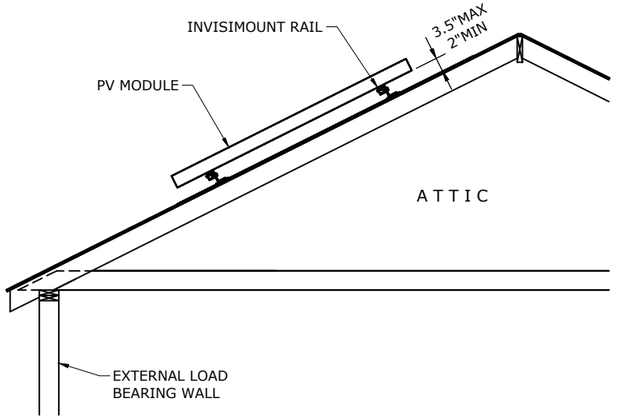
SHEET
PVA-1

TABLE 1 – ARRAYS INFORMATION

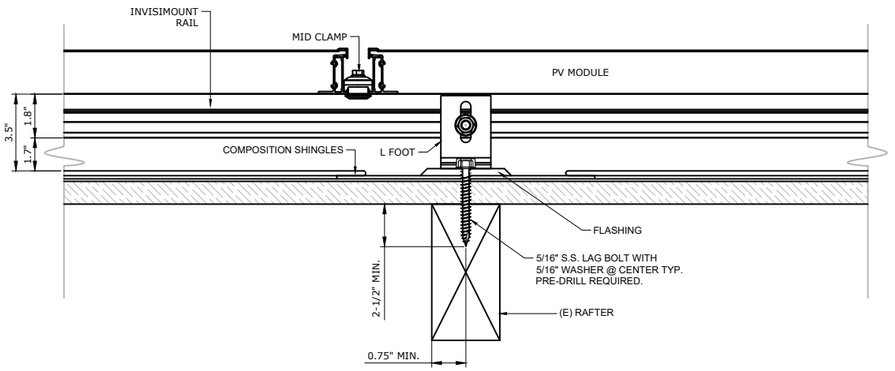
	ROOF PITCH	ROOFING TYPE	ATTACHMENT TYPE	NO. OF STORIES	FRAMING TYPE (in.)	MAX. RAFTER SPAN (ft.)	PENETRATION PATTERN (in.)	MAX. ATTACHMENT SPACING (in.)	MAX. RAIL OVERHANG (in.)
ROOF 1	20.5°	Comp Shingle	Pegasus L-foot	2	2x8 Rafter @ 16" OC	15.5'	Fully Staggered	48"	16"
ROOF 2	20.5°	Comp Shingle	Pegasus L-foot	2	2x8 Rafter @ 16" OC	15.1'	Fully Staggered	48"	16"
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--



STRUCTURAL FRAMING SIDE DETAIL
Roof 1



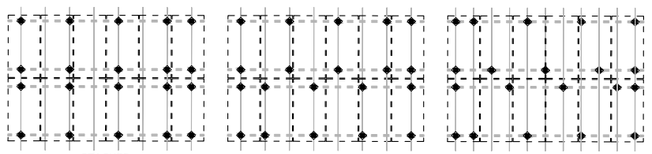
STRUCTURAL FRAMING SIDE DETAIL
Roof 2



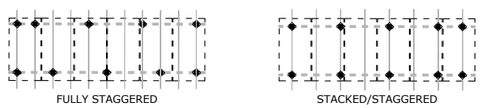
INVISIMOUNT ROOF ATTACHMENT DETAILS
HARDWARE: PEGASUS L-FOOT

TABLE 2: PENETRATION GUIDE FOR INSTALL

TWO OR MORE ROWS OF MODULES

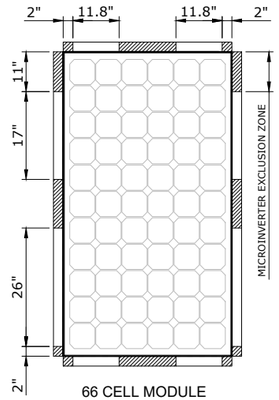


ONE ROW OF MODULES



*CHECK TABLE 1 FOR MAX.. PENETRATION SPACING AND PENETRATION PATTERN FOR EACH ARRAY.

FIGURE 3: MOUNTING CLAMP POSITIONING DETAILS



•RAILS SHALL BE POSITIONED IN THE NON-CROSS HATCHED REGIONS

SUNPOWER®
CORPORATION, SYSTEMS
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804
(510) 540-0550

SPRI - NEW YORK
777 WESTCHESTER AVE.
WHITE PLAINS, NY 10604

(FOR STRUCTURAL)

STATE OF NEW YORK
PAYMON ESKANDANIAN
95481
LICENSED PROFESSIONAL ENGINEER

JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE
STRUCTURAL INFORMATION
AND MOUNTING DETAILS

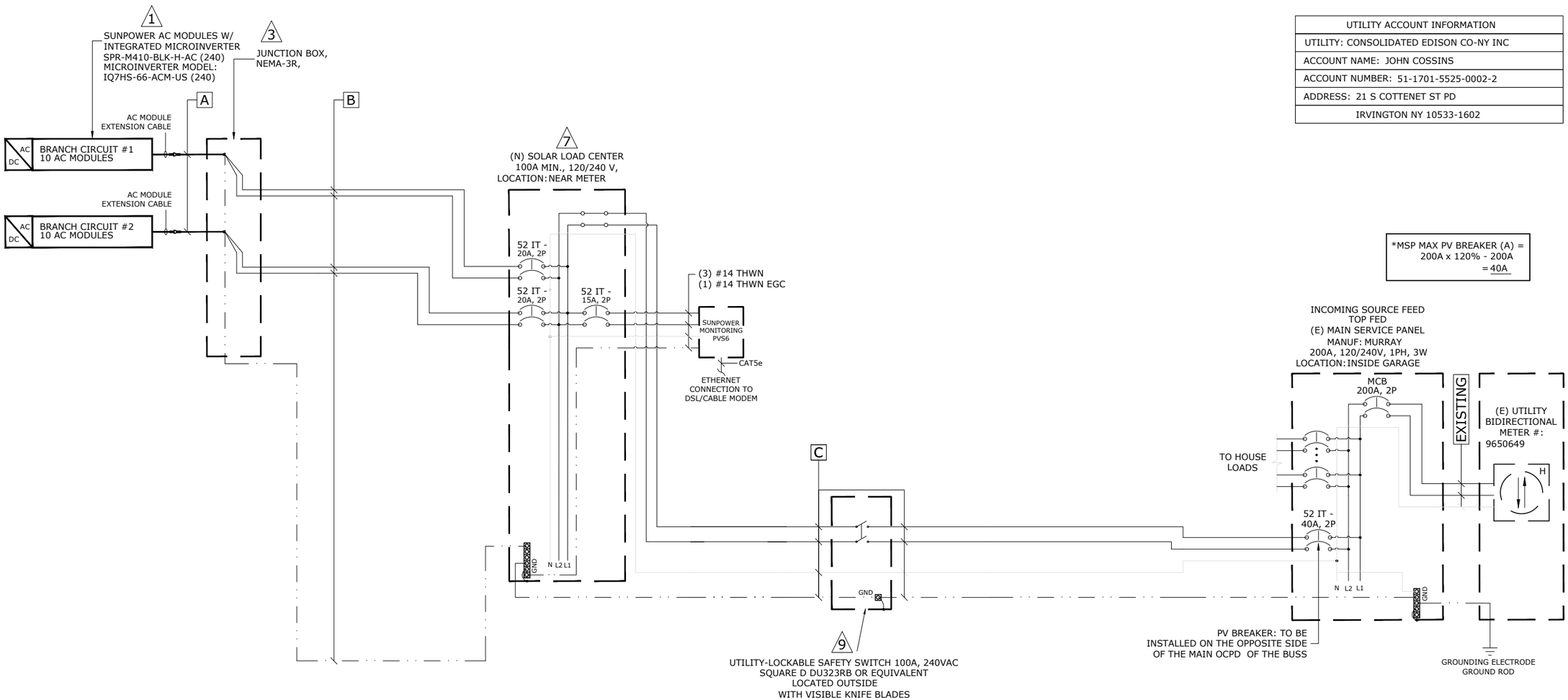
REVISIONS

REV	DESCRIPTION	DATE	DB

DRAWN BY:
PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	NTS
SHEET	PVS-1

FIGURE A: THREE LINE DIAGRAM - 8.20 kW



UTILITY ACCOUNT INFORMATION
UTILITY: CONSOLIDATED EDISON CO-NY INC
ACCOUNT NAME: JOHN COSSINS
ACCOUNT NUMBER: 51-1701-5525-0002-2
ADDRESS: 21 S COTTENET ST PD
IRVINGTON NY 10533-1602

TAG	DESCRIPTION	
1	SOLAR AC MODULE / BRANCH	ACM
2	DC / DC CONVERTERS	NO
3	SOURCE CIRCUIT JUNCTION BOX	YES
4	SEPARATE DC DISCONNECT	NO
5	INTERNAL INVERTER DC DISCONNECT	NO
6	STRING INVERTER	NO
7	SOLAR LOAD CENTER	YES
8	PV PRODUCTION METER	YES
9	SEPARATE AC DISCONNECT	YES

PV CERTIFICATIONS AND COMPLIANCE
- UL 1741 / IEEE-1547
- UL 1741 AC MODULE (TYPE 2 FIRE RATED)
- UL 62109-1 / IEC 62109-2
- UL LISTED PV RAPID SHUTDOWN EQUIPMENT

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)

CONDUCTOR / CONDUIT SCHEDULE

TAG	DESCRIPTION & CONDUCTOR TYPE	CONDUCTOR SIZE (AWG)	NUMBER OF CONDUCTORS	CONDUIT/CABLE TYPE	CONDUIT SIZE
A	SUNPOWER PROVIDED AC MODULES EXTENSION CABLE, LISTED AS AN ASSEMBLY	#12	2	BRANCH CIRCUIT FROM PV ARRAY TO JUNCTION BOX	--
	EGC: BARE Cu	#6	1		
B	THWN-2	#10	4	EMT	3/4"
	EGC: THWN-2	#10	1		
C	THWN-2	#8	3	EMT	3/4"
	EGC: THWN-2	#10	1		

ELECTRICAL NOTES

1. PROPER LISTING EXPECTED FOR CONDITIONS OF USE ON ALL LUGS, FITTINGS, CRIMPS, ETC.
2. ALL CONDUIT BEND RADII TO CONFORM TO THE NEC MINIMUM BEND RADII REQUIREMENTS.
3. MINIMUM CLEARANCE SHALL BE MAINTAINED PER NEC FOR ALL NEW EQUIPMENT TO BE INSTALLED.
4. EXISTING GROUNDING ELECTRODE SYSTEM MUST MEET NEC AND LOCAL UTILITY REQUIREMENTS.
5. COPPER CONDUCTORS SHALL BE USED UNLESS SPECIFIED.
6. TYPE NM (ROMEX) CONDUCTORS ARE ALLOWED FOR INTERNAL AND ATTIC RUNS AND SHALL BE INSTALLED MEETING NEC REQUIREMENTS.
7. IF MAIN SERVICE PANEL IS TO BE UPGRADED, IT WILL BE PERMITTED AND INSTALLED BY 3RD PARTY.
8. AC WIRING SHALL UPSIZE IF VOLTAGE DROP EXCEEDS 2%.
9. RUN CONDUCTORS IN EXISTING CONDUIT WHEN AVAILABLE PROVIDED IT HAS NO OTHER CONDUCTORS RUNNING THROUGH IT.
10. EQUIVALENT SPECIFICATION ON CABLES AND ELECTRICAL EQUIPMENT SPECIFIED ARE ACCEPTABLE.
11. AS DC POWER IS INTERNAL TO THE MODULE, GROUNDING ELECTRODE CONDUCTOR (GEC) FOR THE MODULE OR ARRAY IS NOT REQUIRED.

AC MODULES NOTES

1. DC CIRCUIT IS ISOLATED AND INSULATED FROM GROUND AND MEETS THE REQUIREMENT OF NEC 690.35.
2. SUNPOWER PROVIDED CABLES COMES WITH TWO (2) #12 AWG WIRE AND THIS IS BY DESIGN. NEUTRAL AND ADDITIONAL GROUND WIRE IS NOT REQUIRED FOR PROVIDED TRUNK AND EXTENSION CABLES.
3. SUNPOWER AC MODULES HAVE BEEN TESTED AND CERTIFIED TO UL 2703 FOR INTEGRATED GROUNDING AND HENCE A SEPARATE GROUND WIRE IS NOT REQUIRED WITHIN THE ARRAY.
4. USE ROW-TO-ROW GROUNDING CLIP PROVIDED TO GROUND ROWS OF MODULE. BOND SUB-ARRAYS BY RUNNING #6 AWG BARE CU WIRE AND GROUND LUGS AT A SINGLE POINT ON EACH SUB-ARRAY AND THEN TO THE JUNCTION BOX. REFER TO PVE-4 FOR ADDITIONAL DETAILS.

SUNPOWER®
CORPORATION, SYSTEMS
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804
(510) 540-0550

SPRI - NEW YORK
777 WESTCHESTER AVE.
WHITE PLAINS, NY 10604

JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE
ELECTRICAL THREE-LINE DIAGRAM
& SPECIFICATIONS

REVISIONS

REV	DESCRIPTION	DATE	DB

DRAWN BY:
PKatigbak
PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	NTS

SHEET
PVE-1

ELECTRICAL CALCULATIONS

SUBPANEL TO GRID-TIE WIRING	#8
VOLTAGE	240 V
SUM OF BRANCHES: I_{OUT_TOTAL} =	32 A
MINIMUM WIRE AMPACITY: I_{MAX} = IOUT x 1.25	40.00 A
CONDUCTOR DE-RATING	
MAXIMUM AMBIENT TEMPERATURE	35 °C
TEMPERATURE USED FOR AMPACITY DE-RATING	35 °C
TEMPERATURE DE-RATING COEFFICIENT	0.96
FILL DE-RATING COEFFICIENT	1.00
$I_{WIREMIN}$ = I_{OUT} / TEMP_COEFF / FILL_COEFF	33.33 A
WIRE SIZE AMPACITY	55 A
CONDUCTOR SIZE	#8
CONDUCTOR SIZE ADJUSTED FOR VOLTAGE DROP	#8
ONE WAY CIRCUIT LENGTH	8 FT.
VOLTAGE DROP	0.17%
OVERCURRENT PROTECTION	**40A, 2P**
MINIMUM OCPD = I_{OUT} x 1.25	40.00 A

	BRANCH 1	BRANCH 2
ROOF JCT BOX TO SUBPANEL WIRING	**#10**	**#10**
NUMBER OF MODULES	10	10
VOLTAGE	240 V	240 V
RATED AC OUTPUT CURRENT: I_{OUT} =	16 A	16 A
MINIMUM WIRE AMPACITY: I_{MAX} = I_{OUT} x 1.25	20.00 A	20.00 A
CONDUCTOR DE-RATING		
MAXIMUM AMBIENT TEMPERATURE	35 °C	35 °C
TEMPERATURE ADDER	22 °C	22 °C
TEMPERATURE USED FOR AMPACITY DE-RATING	57 °C	57 °C
TEMPERATURE DE-RATING COEFFICIENT	0.71	0.71
FILL DE-RATING COEFFICIENT	0.8	0.8
$I_{WIREMIN}$ = I_{OUT} / TEMP_COEFF / FILL_COEFF	28.17 A	28.17 A
WIRE SIZE AMPACITY	40 A	40 A
CONDUCTOR SIZE	#10	#10
CONDUCTOR SIZE ADJUSTED FOR VOLTAGE DROP	#10	#10
ONE WAY CIRCUIT LENGTH	35 FT.	35 FT.
CALCULATED VOLTAGE DROP	0.58%	0.58%
OVERCURRENT PROTECTION	**20A, 2P**	**20A, 2P**
MINIMUM OCPD = I_{OUT} x 1.25	20.00 A	20.00 A

SUNPOWER®
CORPORATION, SYSTEMS
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804
(510) 540-0550

SPRI - NEW YORK
777 WESTCHESTER AVE.
WHITE PLAINS, NY 10604

JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE
ELECTRICAL CALCULATION

REVISIONS

REV	DESCRIPTION	DATE	DB

DRAWN BY:
PKatigbak
PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	NTS

SHEET
PVE-2

ELECTRICAL DATA & SPECIFICATIONS

PHOTOVOLTAIC POINT OF INTERCONNECTION
WARNING: DUAL POWER SOURCE. SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

MAXIMUM RATED AC OUTPUT CURRENT:	32 A	AMPS
MAXIMUM OPERATING AC VOLTAGE:	240 V	VOLTS

SIGNAGE LOCATIONS:

- MAIN SERVICE PANEL
- INDOOR / OUTDOOR SUBPANEL

PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

SIGNAGE LOCATIONS:

- MAIN SERVICE PANEL

PV SOLAR BREAKER
DO NOT RELOCATE THIS OVERCURRENT DEVICE

SIGNAGE LOCATIONS:

- MAIN SERVICE PANEL
- NEW INDOOR / OUTDOOR LOAD CENTER
- INDOOR / OUTDOOR SUBPANEL

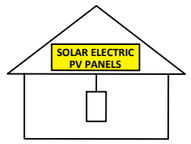
RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

SIGNAGE LOCATIONS:

- LABEL SHALL BE LOCATED ON OR NO MORE THAN 1M (3FT) FROM THE SWITCH

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN AND REDUCE SHOCK HAZARD IN THE ARRAY



SIGNAGE LOCATIONS:

- SHALL BE LOCATED ON OR NO MORE THAN 1 M (3 FT) FROM THE SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED.

PHOTOVOLTAIC SYSTEM AC DISCONNECT

RATED AC OUTPUT CURRENT:	32 A	AMPS
NOMINAL OPERATING AC VOLTAGE:	240 V	VOLTS

SIGNAGE LOCATIONS:

- INDOOR / OUTDOOR AC DISCONNECT

SIGNAGE NOTES

1. MATERIAL USED FOR THE SIGNAGE SHALL BE REFLECTIVE, WEATHER RESISTANT AND SUITABLE FOR THE ENVIRONMENT.
2. ALL SIGNAGE SHALL HAVE ALL CAPITAL LETTERS WITH MINIMUM ⅜" LETTER HEIGHT, WHITE ON RED BACKGROUND.
3. MAIN SERVICE DISCONNECT MARKING SHALL BE PLACED ADJACENT TO MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE LEVER IS OPERATED.
4. MARKING IS REQUIRED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES, CABLE ASSEMBLIES, AND JUNCTION BOXES TO ALERT THE FIRE SERVICE TO AVOID CUTTING THEM. MARKINGS SHALL BE PLACED EVERY 10', AT TURNS AND ABOVE AND/OR BELOW PENETRATIONS, AND AT ALL DC COMBINER AND JUNCTION BOXES.
5. DO NOT USE SCREWS FOR SIGNAGE ATTACHMENT. USE ONLY APPROVED ADHESIVE.

SUNPOWER®
CORPORATION, SYSTEMS
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804
(510) 540-0550

SPRI - NEW YORK
777 WESTCHESTER AVE.
WHITE PLAINS, NY 10604

JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE
ELECTRICAL DATA & SPECIFICATIONS

REVISIONS

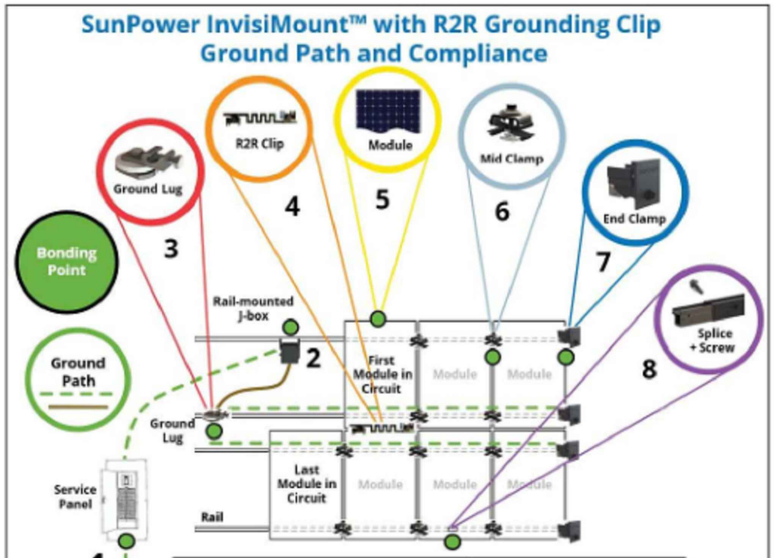
REV	DESCRIPTION	DATE	DB

DRAWN BY:
PKatigbak
PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	NTS

SHEET
PVE-3

SunPower InvisiMount™ with R2R Grounding Clip Ground Path and Compliance



	Bonding Components	Compliance NEC	Compliance UL
1	Grounding Electrode to Service Panel	690.47(A) 690.47(D)	n/a
2	Service Panel to Ground Wire	690.43(C)	1741
3	Ground Wire to Ground Lug to Rail	690.43(C)	2703
4	Module Frame to Module Frame	690.43(C)	2703
5	Module Frame	n/a	1703
6	Rail to Mid Clamp to Module Frame	690.43(A) 690.43(C) 690.43(D)	2703
7	Module Frame to End Clamp to Rail	690.43(A) 690.43(C) 690.43(D)	2703
8	Rail to Splice	690.43(A) 690.43(C) 690.43(D)	2703

FIGURE 1: SUNPOWER EQUINOX GROUNDING DETAILS

CAUTION:

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECT(S) LOCATED AS SHOWN:

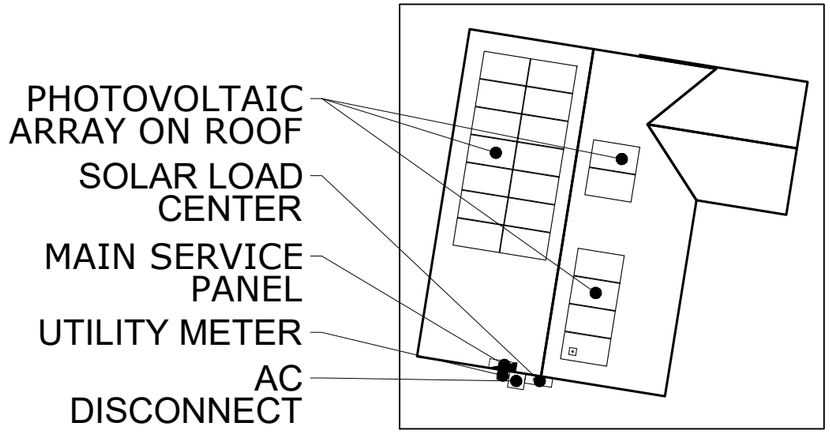


FIGURE 2: PLACARD IDENTIFYING LOCATION OF DISCONNECTS AND POWER SOURCES

SUNPOWER®
CORPORATION, SYSTEMS
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804
(510) 540-0550

SPRI - NEW YORK
777 WESTCHESTER AVE.
WHITE PLAINS, NY 10604

JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE

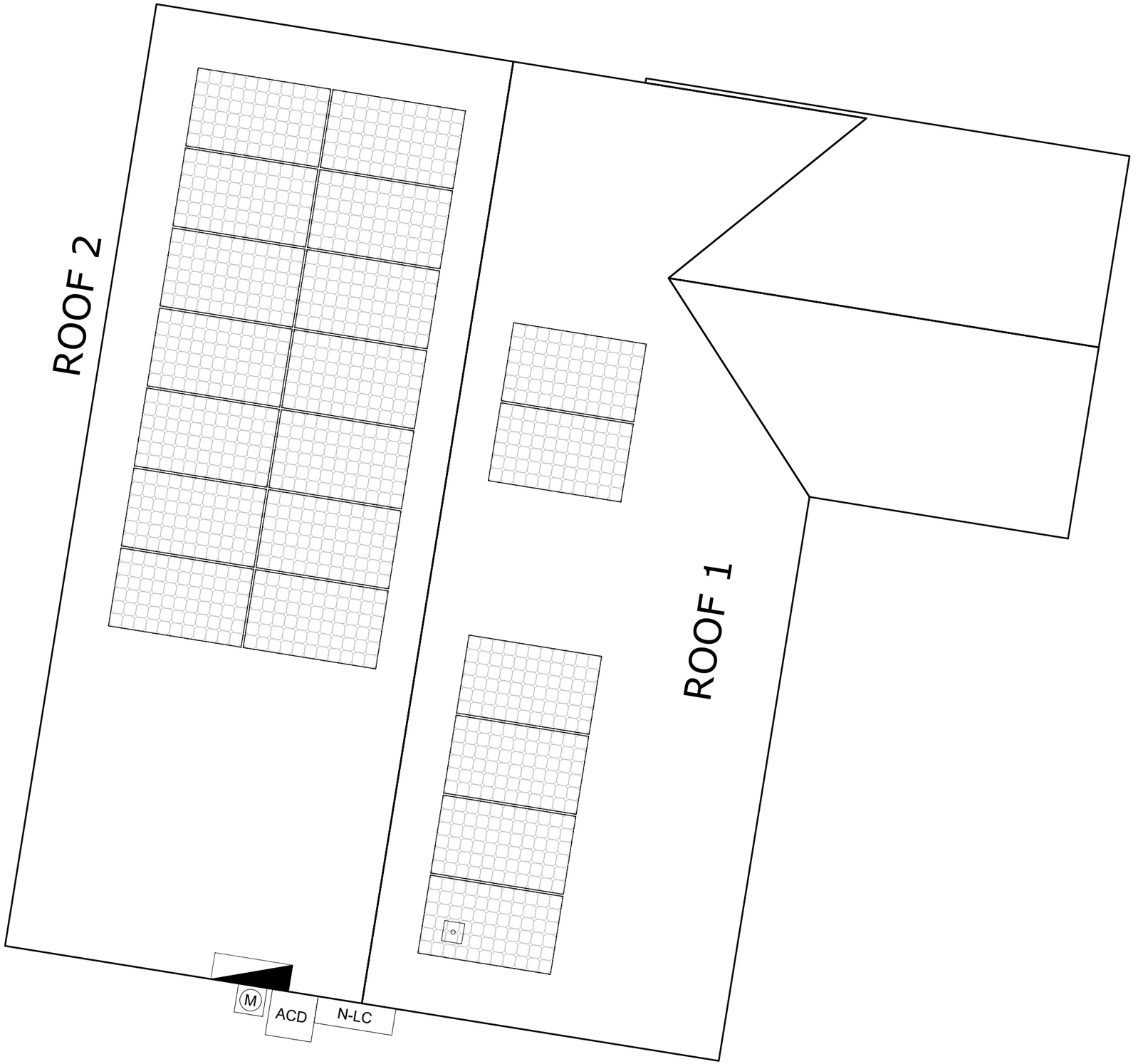
REVISIONS

REV	DESCRIPTION	DATE	DB

DRAWN BY: PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	NTS

SHEET PVE-4



INSTALLER NAME:

_____

BRANCH VOLTAGES:

1.
2.
3.
4.
5.
6.

ROOF	1	2				
MODULE QTY.	6	14				
AZIMUTH	99°	279°				
PITCH	4.5:12	4.5:12				

SUNPOWER®
CORPORATION, SYSTEMS
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804
(510) 540-0550

SPRI - NEW YORK
777 WESTCHESTER AVE.
WHITE PLAINS, NY 10604

JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE
BRANCH DIAGRAM

REVISIONS

REV	DESCRIPTION	DATE	DB

DRAWN BY:
PKatigbak
PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	55/256" = 1'-0"

SHEET
PVE-5

M SERIES

SUNPOWER®

425-410 W Residential Black AC Module

SunPower® Maxeon® Technology

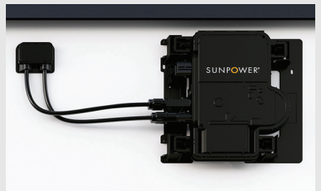
Built specifically for use with the SunPower Equinox® system, the only fully integrated solution designed, engineered, and warranted by one company.

Part of the SunPower Equinox® Solar System

- Seamless aesthetics
- Compatible with mySunPower monitoring

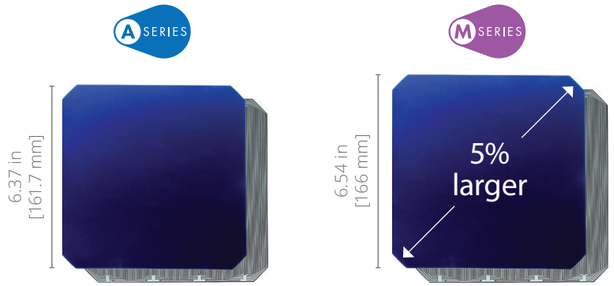
Factory-integrated Microinverter

- Highest-power integrated AC module in solar
- Engineered and calibrated by SunPower for SunPower AC modules



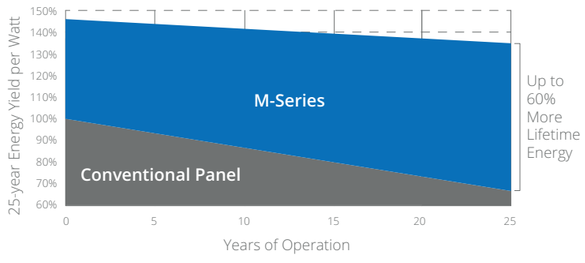
Highest Power Density Available

The patented, solid-copper foundation Maxeon Gen 6 cell is over 5% larger than prior generations, delivering the highest-efficiency all-black AC solar module available.[1]



Highest Lifetime Energy and Savings

Designed to deliver 60% more energy over 25 years in real-world conditions like partial shade and high temperatures.[2]



Best Reliability, Best Warranty

With more than 42.6 million and 15 GW of 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.

M425-BLK | M415-BLK | M410-BLK SunPower Residential Black AC Module

AC Electrical Data		
Inverter Model: Type H (Enphase IQ7HS)	@240 VAC	@208 VAC
Max. Continuous Output Power (VA)	384	369
Nom. (L–L) Voltage/Range[3] (V)	240 / 211–264	208 / 183–229
Max. Continuous Output Current (A)	1.60	1.77
Max. Units per 20 A (L–L) Branch Circuit[4]	10	9
CEC Weighted Efficiency	97.0%	96.5%
Nom. Frequency	60 Hz	60 Hz
Extended Frequency Range	47–68 Hz	47–68 Hz
AC Short Circuit Fault Current Over 3 Cycles	4.82 A	4.82 A
Overvoltage Class AC Port	III	III
AC Port Backfeed Current	18 mA	18 mA
Power Factor Setting	1.0	1.0
Power Factor (adjustable)	0.85 (inductive) / 0.85 (capacitive)	0.85 (inductive) / 0.85 (capacitive)

DC Power Data	SPR-M425-BLK-H-AC	SPR-M415-BLK-H-AC	SPR-M410-BLK-H-AC
Nom. Power[6] (Pnom) W	425	415	410
Power Tolerance	+5/–0%	+5/–0%	+5/–0%
Module Efficiency	22.0%	21.5%	21.2%
Temp. Coef. (Power)	–0.29% / °C	–0.29% / °C	–0.29% / °C
Shade Tolerance	Integrated module-level max. power point tracking		

Tested Operating Conditions	
Operating Temp.	–40° F to +185° F (–40° C to +85° C)
Max. Ambient Temp.	122° F (50° C)
Max. Test Load[8]	Wind: 125 psf, 6000 Pa, 611 kg/m² back Snow: 187 psf, 9000 Pa, 917 kg/m² front
Max. Design Load	Wind: 75 psf, 3600 Pa, 367 kg/m² back Snow: 125 psf, 5400 Pa, 550 kg/m² front
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)

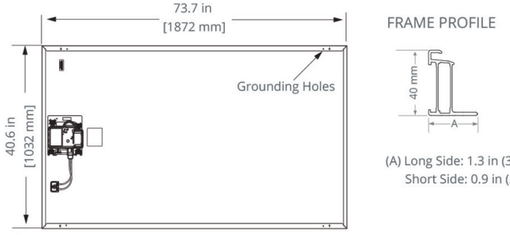
Mechanical Data	
Solar Cells	66 Maxeon Gen 6
Front Glass	High-transmission tempered glass with anti-reflective coating
Environmental Rating	Outdoor rated
Frame	Class 1 black anodized (highest AAMA rating)
Weight	48 lbs (21.8 kg)
Recommended Max. Module Spacing	1.3 in. (33 mm)

Warranties, Certifications, and Compliance	
Warranties	• 25-year limited power warranty • 25-year limited product warranty
Certifications and Compliance	• UL 1741 / IEEE-1547 • UL 1741 AC Module • UL 61730 (Type 2 fire rated) • UL 62109-1 / IEC 62109-2 • FCC Part 15 Class B • ICES-0003 Class B • CAN/CSA-C22.2 NO. 107.1-01 • CA Rule 21 (UL 1741 SA)[5] (includes Volt/Var and Reactive Power Priority) • UL Listed PV Rapid Shutdown Equipment[7] 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 AC module Q Cables and accessories (UL 6703 and UL 2238)[7] • Rated for load break disconnect
PID Test	1000 V: IEC 62804

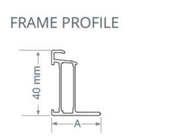
Packaging Configuration	
Modules per pallet	25
Packaging box dimensions	**75.4**
Pallet gross weight	1300 lb (590 kg)
Pallets per container	32
Net weight per container	18,880 kg

1 Based on datasheet review of websites of top 20 manufacturers per IHS, as of July 2021.
2 Maxeon 435 W, 22.5% efficient, compared to a Conventional Panel on same-sized arrays (300 W, 19% efficient, approx. 1.6 m²), 7.9% more energy per watt (based on PVSyst pan files for avg. US climate), 0.5%/yr slower degradation rate (Jordan, et. al. "Robust PV Degradation Methodology and Application."PVSC 2018).
3 Based on search of datasheet values from websites of top 10 manufacturers per IHS, as of June 2021.
4 Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.
5 Factory set to IEEE 1547a-2014 default settings. CA Rule 21 default settings profile set during commissioning.
6 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25°C). All DC voltage is fully contained within the module.
7 UL Listed as PVRSE and conforms with NEC 2014 and NEC 2017 690.12; and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors; when installed according to manufacturer's instructions.
8 Please read the safety and installation instructions for more information regarding load ratings and mounting configurations.

See www.sunpower.com/company for more reference information.
For more details, see extended datasheet: www.sunpower.com/solar-resources.
Specifications included in this datasheet are subject to change without notice.



Please read the safety and installation instructions for details.



(A) Long Side: 1.3 in (32 mm)
Short Side: 0.9 in (24 mm)

AC MODULE
GRID SUPPORT UTILITY INTERACTIVE
PV RAPID SHUTDOWN EQUIPMENT
LISTED E478330
Module Fire Performance: Type 2

544400 RevA
January 2022

PEGASUS SOLAR™

A BETTER DAY ON THE JOB

COMP MOUNTS




WATERTIGHT FOR LIFE

Pegasus Solar's Comp Mounts are a cost effective, high-quality option for rail installations on composition shingle roofs. Designed to last decades, the one-piece flashing with elevated cone means there is simply nothing to fail.

25-year Warranty
Manufactured with advanced materials and coatings to outlast the roof itself

Superior Waterproofing
Tested to AC286 without sealant
0.9" elevated water seal

Code Compliant
Fully IBC/CBC Code Compliant
Exceeds ASCE 7-16 Standards

All-In-One Kit Packaging
Flashings, L-Feet and SS lags with bonded EPDM washers are included in each 24-pack

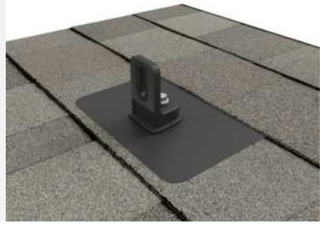
COMP MOUNTS

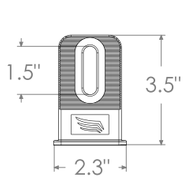
1. Drill pilot hole in center of rafter.

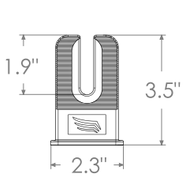
2. Optional: Apply a "U-shape" of sealant to underside of flashing and postition under 2nd shingle course, cone over pilot hole.

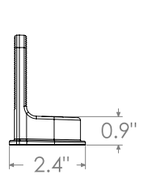
3. Place L-Foot over cone and install lag with washer through L-Foot.

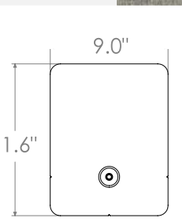
4. Drive lag to required depth. Attach rail per rail manufacturer's instructions.

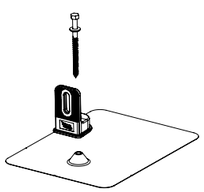












Specifications	Comp Mount Install Kits				
SKU	PSCR-CBB0	PSCR-UBB0	SPCR-CBBH	PSCR-CMM0	PSCR-UMM0
Finish	Black L-Foot and Black Flashing			Mill L-Foot and Mill Flashing	
L-Foot Type	Closed Slot	Open Slot	Closed Slot	Closed Slot	Open Slot
Kit Contents	L-Foot, Flashing, 5/16"x 4-1/2" SS Lag with metalized EPDM washer	L-Foot, Flashing, 5/16"x 4-1/2" SS Lag with metalized EPDM washer	L-Foot, Flashing, 5/16"x 4-1/2" SS Lag with metalized EPDM washer and M10 Hex Bolt	L-Foot, Flashing, 5/16"x 4-1/2" SS Lag with metalized EPDM washer	L-Foot, Flashing, 5/16"x 4-1/2" SS Lag with metalized EPDM washer
Roof Type	Composition Shingle				
Certifications	IBC, ASCE/SEI 7-16, AC286				
Install Application	Railed Systems				
Compatible Rail	Most				
Flashing Material	Painted Galvalume Plus			Galvalume Plus	
L-Foot Material	Aluminum				
Kit Quantity	24				
	72				

Pegasus Solar Inc • 100 West Ohio Avenue, Richmond, CA 94804 • T: 510.210.3797 • **www.pegasussolar.com**

SunPower® InvisiMount™ | Residential Mounting System

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

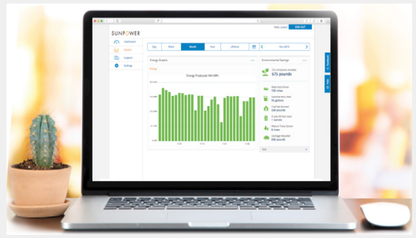
- Addresses nearly all sloped residential roofs
- Design in landscape and portrait with up to 8′ rail span
- Pre-drilled rails and rail splice
- Rails enable easy obstacle management

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

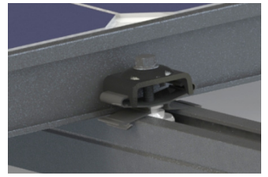
SunPower® InvisiMount™ is a SunPower-designed rail-based mounting system. The InvisiMount system addresses residential sloped roofs and combines faster installation time, design flexibility, and superior aesthetics. The InvisiMount product was specifically envisioned and engineered to pair with SunPower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

sunpower.com

SunPower® InvisiMount™ | Residential Mounting System

InvisiMount Components

Module[1] / Mid Clamp and Rail



Module[1] / End Clamp and Rail

Ground Lug Assembly

Row-to-Row Spacer

End Clamp

Mid Clamp

Row-to-Row Grounding Clip

Rail and Rail Splice

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 (9 oz/ft)
Rail splice	Aluminum alloy 6000 series	830 g/m (9 oz/ft)
Rail bolt	M10-1.5 × 25 mm; custom T-head SS304	18 g (0.63 oz)
Rail nut	M10-1.5; DIN 6923 SS304	nominal
Ground lug assembly	SS304; A2-70 bolt; tin-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-grade plastic	5 g (0.18 oz)

InvisiMount Component LRFD Capacities[2]		
Mid clamp	Uplift	664 lbf
	Shear	540 lbf
End clamp	Uplift	899 lbf
	Shear	220 lbf
Rail	Moment: upward	548 lbf-ft
	Moment: downward	580 lbf-ft
Rail splice	Moment: upward	548 lbf-ft
	Moment: downward	580 lbf-ft
L-foot	Uplift	1000 lbf
	Shear	390 lbf

InvisiMount Operating Conditions	
Temperature	−40° C to 90° C (−40° F to 194° F)
Max. Load (LRFD)	• 3000 Pa uplift • 6000 Pa downforce

Roof Attachment Hardware Supported by Design Tool	
Application	• Composition Shingle Rafter Attachment • Composition Shingle 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 Equinox™, InvisiMount™, and AC module systems always be designed using the InvisiMount Span Tables #524734. If a designer decides to instead use the component capacities listed in this document to design a system, note that the capacities shown are Load and Resistance Factor Design (LRFD) design loads, and are NOT to be used for Allowable Stress Design (ASD) calculations; and that a licensed Professional Engineer (PE) must then stamp all calculations. If you have any questions please contact SunPower Technical Support at 1-855-977-7867.

sunpower.com
509506 RevF

SunPower® Monitoring | Residential SunPower PV Supervisor

Improve Support, Reduce Costs

An intuitive monitoring website enables you to:

- See a visual map of customer sites
- Remotely manage hundreds of sites
- Remotely diagnose and troubleshoot system issues
- Drill down for the status of individual devices

Add Value for Customers

With mySunPower™ monitoring customers can:

- Track their energy production by day, month, year and in different weather conditions
- See their energy use and estimated bill savings
- Maximize their savings with automatic system alerts and tips
- Customize storage settings and easily monitor and track available battery power
- Receive elective system reports

SunPower® Monitoring—Plug-and-Play Installation

This complete solution for residential monitoring and control includes the SunPower® PV Supervisor (PVS) which improves the installation process, overall system reliability, and customer experience:

- Compact footprint for improved aesthetics
- Robust cloud connectivity and comprehensive local connectivity
- Flexible configuration of devices during installation
- Consumption metering
- Revenue-quality production metering
- Web-based commissioning
- Remote diagnostics of PVS and inverters
- Durable UL Type 3R enclosure helps reduce maintenance costs
- Easy integration with SunPower eBOS

Robust Cloud Connectivity

Multiple options to maintain optimal connectivity:

- Hardwired Ethernet
- WiFi
- Cellular backup

sunpower.com

SUNPOWER®

Site Requirements	
Number of modules supported per PVS	• 85 (SunPower AC modules)
Internet access	• High-speed internet access via accessible router or switch
Power	• 100–240 VAC (L–N), 50 or 60 Hz • 208 VAC (L–L in phase 3), 60 Hz

Mechanical	
Weight	• 5.5 lb (2.5 kg)
Dimensions	• 11.8 × 8.0 × 4.2 in. (30.5 × 20.5 × 10.8 cm)
Enclosure rating	• UL 50E Type 3R

Operating Conditions	
Temperature	• –22°F to +140°F (–30°C to +60°C)
Humidity (max.)	• 95%, non-condensing

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

Communication	
RS-485	• Supports string inverters, external meters, and other auxiliary devices
Integrated metering	• One channel of revenue-quality production metering • Two channels of consumption metering
Ethernet	• 1 LAN (or optional WAN) port
PLC	• Supports SunPower AC modules
WiFi	• 802.11b/g/n 2.4 GHz and 5 GHz
Cellular	• LTE Cat-M1/3G UMTS
ZigBee	• IEEE 802.15.4 MAC, 2.4 GHz ISM band
Data storage	• 60 days
Upgrades	• Automatic firmware upgrades

Web and Mobile Device Support	
Customer site	• mysunpower.com
Partner site	• monitor.sunpower.com
Browsers	• Firefox, Safari, and Chrome
Mobile devices	• iPhone®, iPad®, and Android™
Customer app	1 Create account online at mysunpower.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

CLASSIFIED UL

SUNPOWER®

530536 Rev D

Equinox Junction Boxes

InvisiMount™ Rail-Mounted Junction Box (RMJ) v2

- 70% larger than original InvisiMount J-box.
- Integrated grounding to InvisiMount rail, replacing grounding lug assembly.
- Snap-on attachment for fast and secure installation.

Composition Shingle Roof Transition Junction Box

- Enables transitioning conductors directly through the roof.
- Integrated flashing for peace of mind.
- Compatible with composition shingle roofs.

SPECIFICATIONS

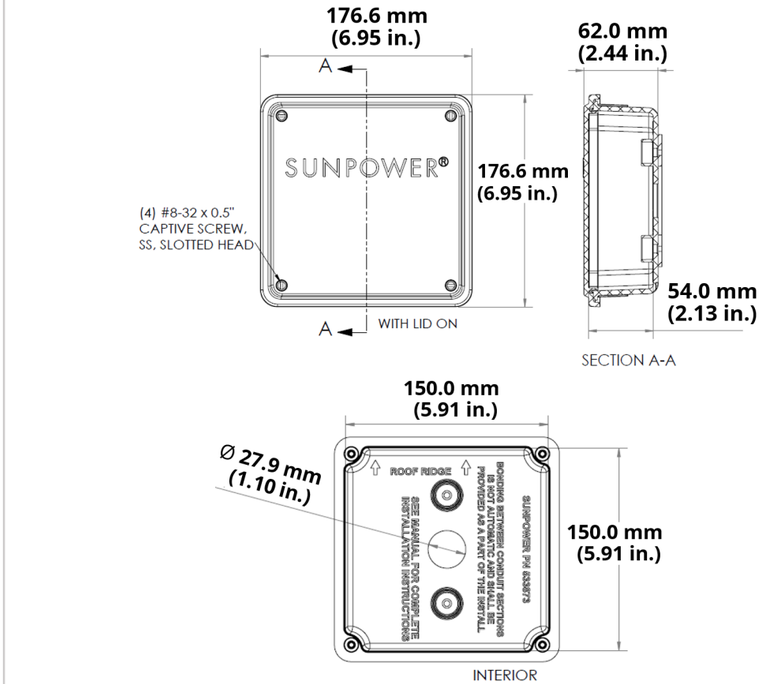
Model	RMJ v2	Comp Shingle Transition J-Box
Kit Part Number	530167	530168
Max. Voltage Rating	600 V (AC or DC)	
Ambient Temp. Range	−35°C to 75°C (−31°F to 167°F)	
Enclosure Material	Flame-retardant, UV-resistant, high-impact resistant resin	
Attachment/Flashing Material	304 stainless steel	Steel w/zinc-aluminum coating
Cavity Dimensions	150 × 150 × 62 mm (5.91” × 5.91” × 2.13”)	
Enclosure Volume	1150 cc (70 in^3)	
Attachment/Flashing Finish	Black oxide	Black powder coat
Compatibility	InvisiMount rail	Comp shingle roofs
Assembled Weight	0.78 kg (1.7 lb)	1.27 kg (2.8 lb)
Certifications & Ratings	• Watertight, UL Type 4 • UL 94 5VA • UL 1741 • UL 2703 (with InvisiMount)	• Watertight, UL Type 4 • UL 94 5VA • UL 1741
Additional Hardware Included	• 3/4” cord grip • Lay-in lug	• 3/4” cord grip • #12 screws with EPDM washer

SunPower® Equinox™ Accessories

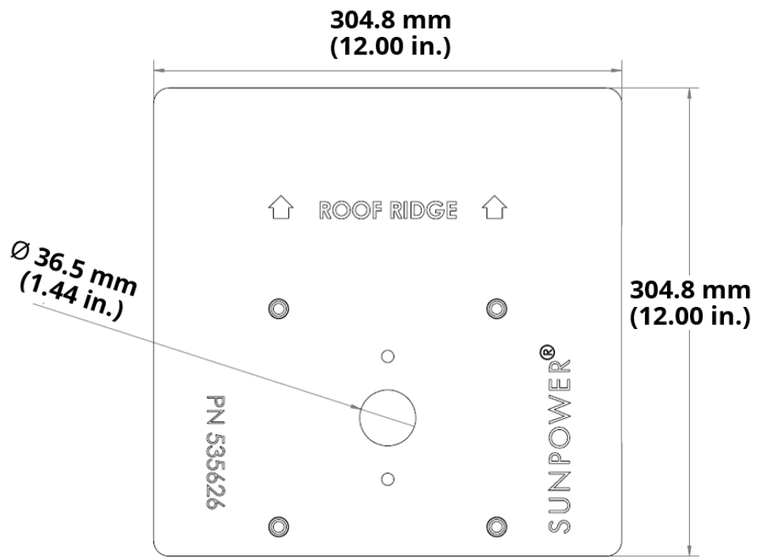
Equinox Junction Boxes

COMPONENT DIMENSIONS

J-Box Enclosure
(used in both RMJ and Transition J-box)



Flashing
(used only with Transition J-Box)



539382 RevA

Datasheet SUNPOWER®

Product data sheet
Characteristics

DU323RB
Safety switch, general duty, non fusible, 100A, 3 poles, 30 hp, 240 VAC, NEMA 3R, bolt-on provision

Product availability : Stock - Normally stocked in distribution facility

Price* : 816.00 USD

Main

Product	Single Throw Safety Switch
Current Rating	100 A
Certifications	UL listed file E2875
Enclosure Rating	NEMA 3R
Disconnect Type	Non-fusible disconnect switch
Factory Installed Neutral	None
Mounting Type	Surface
Number of Poles	3
Electrical Connection	Lugs
Duty Rating	General duty
Voltage Rating	240 V AC
Wire Size	AWG 14...AWG 1 copper AWG 12...AWG 1 aluminium

Complementary

Short-circuit withstand	200 kA
Maximum Horse Power Rating	15 hp 240 V AC 60 Hz 1 phase NEC 430.52 30 hp 240 V AC 60 Hz 3 phase NEC 430.52
Tightening torque	35 lbf.in (3.95 N.m) 0.00…0.01 in² (2.08…5.26 mm²) AWG 14...AWG 10) 35 lbf.in (3.95 N.m) AWG 14...AWG 10) 40 lbf.in (4.52 N.m) 0.01 in² (8.37 mm²) AWG 8) 45 lbf.in (5.08 N.m) 0.02…0.03 in² (12.3…21.12 mm²) AWG 6...AWG 4) 50 lbf.in (5.65 N.m) AWG 3...AWG 1)
Height	17.5 in (444.50 mm)
Width	10.5 in (266.70 mm)

* Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price

Product data sheet
Characteristics

D223NRB
Safety switch, general duty, fusible, 100A, 2 poles, 30 hp, 120 VAC, NEMA 3R, bolt-on provision, neutral factory installed

Product availability : Stock - Normally stocked in distribution facility

Price* : 480.00 USD

Main

Product	Single Throw Safety Switch
Current Rating	100 A
Certifications	UL listed file E2875
Enclosure Rating	NEMA 3R
Disconnect Type	Fusible disconnect switch
Factory Installed Neutral	Neutral (factory installed)
Short Circuit Current Rating	100 kA maximum depending on fuse H, K or R
Mounting Type	Surface
Number of Poles	2
Electrical Connection	Lugs
Duty Rating	General duty
Voltage Rating	240 V AC
Wire Size	AWG 14...AWG 1 copper AWG 12...AWG 1 aluminium

Complementary

Maximum Horse Power Rating	7.5 hp 240 V AC 60 Hz 1 phase NEC 240.6 15 hp 240 V AC 60 Hz 3 phase NEC 240.6 15 hp 240 V AC 60 Hz 1 phase NEC 430.52 30 hp 240 V AC 60 Hz 3 phase NEC 430.52
Tightening torque	35 lbf.in (3.95 N.m) 0.00…0.01 in² (2.08…5.26 mm²) AWG 14...AWG 10) 40 lbf.in (4.52 N.m) 0.01 in² (8.37 mm²) AWG 8) 35 lbf.in (3.95 N.m) AWG 14...AWG 10) 45 lbf.in (5.08 N.m) 0.02…0.03 in² (12.3…21.12 mm²) AWG 6...AWG 4) 50 lbf.in (5.65 N.m) AWG 3...AWG 1)
Height	17.5 in (444.50 mm)

* Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price