

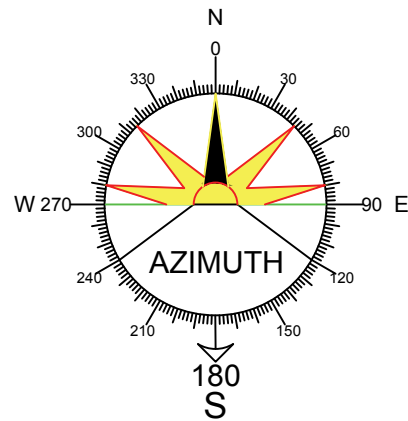
Solar Equipment Summary

<u>MODULE TYPE</u>	<u>NUMBER OF MODS</u>	<u>MODULE SIZE: WATTS</u>	<u>SYSTEM SIZE: WATTS</u>
HANWHA	18	350	6300 WATTS
Inverter(S)			
<u>MANUFACTURER</u>	<u>MODEL</u>	<u>NUMBER OF OPTIMIZERS</u>	<u>SYSTEM OUTPUT</u>
SOLAREEDGE	SE5000H-US	18	21
JOB DETAILS			
<u>ROOF MATERIAL</u>	STANDARD ASPHALT SHINGLE ROOF	<u>SQ FT OF ARRAY</u>	
<u>ARRAY AZIMUTH(S)</u>	180°,90°	326.5	
<u>RACKING TYPE</u>	UL LISTED UNIRAC RACKING SYSTEM USING 48" ANCHORED CENTERS		
<u>INSTALLATION SURFACE ANGLE</u>		22°	

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST CO CODE OF REGULATIONS, NATIONAL ELECTRICAL CODE EDITION AND ALL APPLICABLE LOCAL CODES AND REGULATIONS. (Construction shall comply with CO Building Codes, 2020 NEC, And 2018 International Fire Code.)
2. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE TO UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
3. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
5. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWING IN LAYING OUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND MINIMUM CODE REQUIRED WORKING CLEARANCES AT ALL TIMES.
6. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT SHALL BE WEATHERPROOF TYPE, NEMA 3R.
7. DISCONNECT SWITCHES SHALL BE MOUNTED ON INDIVIDUAL SUPPORTS, OR OTHERWISE DIRECTLY ON EQUIPMENT, PROVIDED.
8. NO MODIFICATION TO EQUIPMENT IS NECESSARY. ALL ELECTRIC MATERIAL SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
9. WIRING METHOD SHALL BE EMT ABOVE GROUND AND MOUNTED IN CONCEALED SPACES (UNLESS APPROVED OTHERWISE) AND SCHEDULE - 40 PVC FOR BELOW GROUND INSTALLATION UNLESS NOTED OTHERWISE.

SHEET INDEX		CO. CONTRACTORS LICENSE #	
<u>PAGE #</u>	<u>DESCRIPTION</u>	EC #1797	ME #600462
PV - 01	TITLE SHEET	APPLICABLE CODES	
PV - 02	SITE PLAN / STRING DETAILS	2020 NATIONAL ELECTRIC CODE (NEC) 2018 INTERNATIONAL BUILDING CODE (IBC)	
PV - 03	ELECTRICAL LINE DIAGRAM		
PV - 04	EQUIPMENT LABELS	NABCEP CERTIFICATION	
PV - 05	RACKING DETAILS	CARSON SMITH PVA-101619-029970	



ARIAL VIEW



VICINITY MAP



DATE:	DESIGNER:	SYSTEM SIZE:	AHJ:
09/09/2021	J. SULLIVAN	6300 WATTS	Greeley

MARCO MANUEL RIVAS
2414 ASH AVE
GREELEY, CO 80631

Revisions	Project #
	111



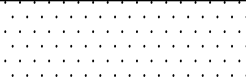






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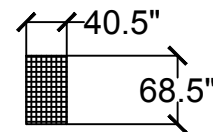
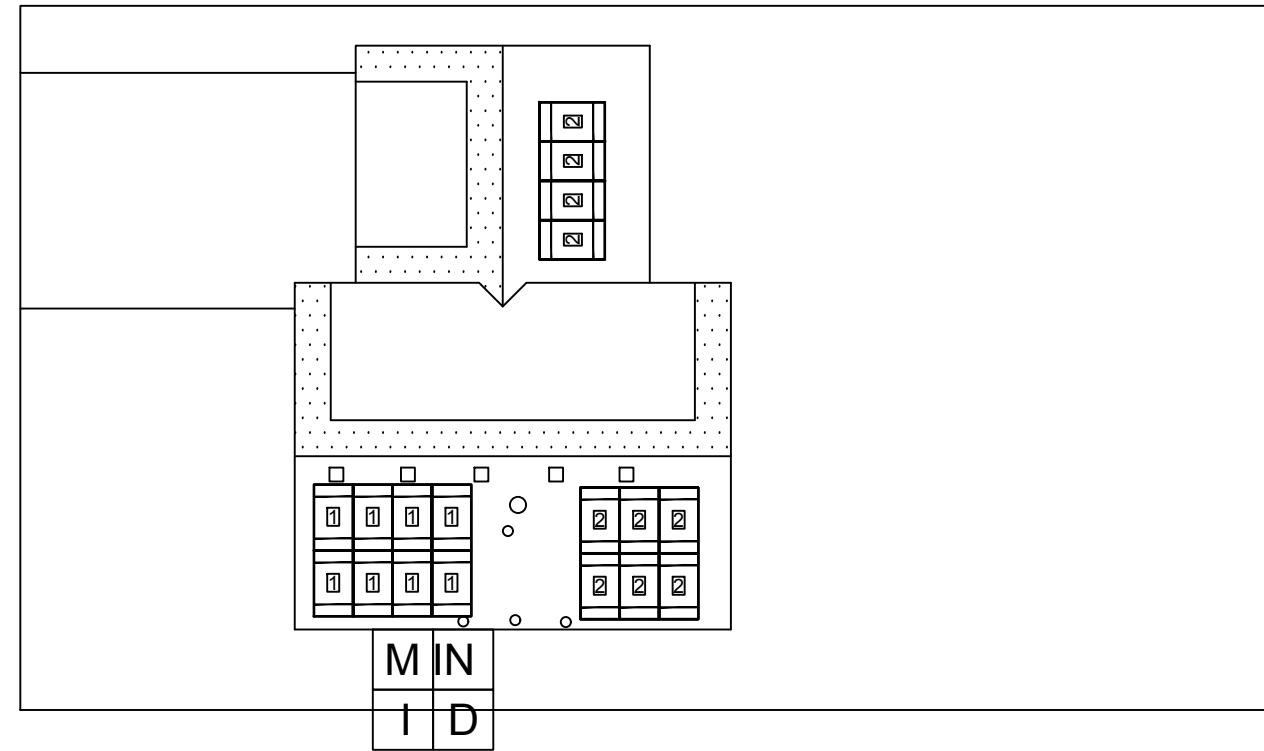
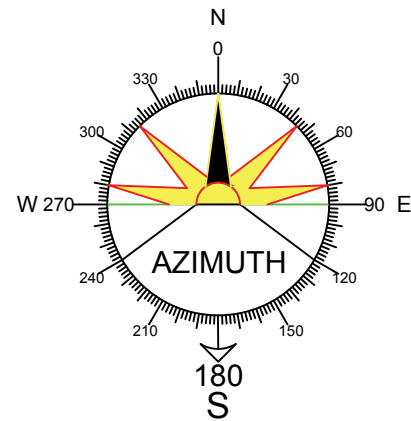
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<u>ARRAY AZIMUTH(S)</u>	180°, 90°		
<u>RACKING TYPE</u>	UL LISTED UNIRAC RACKING SYSTEM USING 48" ANCHORED CENTERS		
<u>INSTALLATION SURFACE ANGLE</u>	22°		

<u>Input</u>	<u># of OPTIMIZERS</u>
1	8
2	10
3	

SYMBOL KEY:

Symbol:	Meaning:
	3' Fire Code
	Nema-4 Soladeck
	Meter Location
	Inverter
	Production Meter
	Interconnection
	Knife Switch Disco.



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DATE:	DESIGNER:	SYSTEM SIZE:	AHJ:
09/09/2021	J. SULLIVAN	6300 WATTS	Greeley

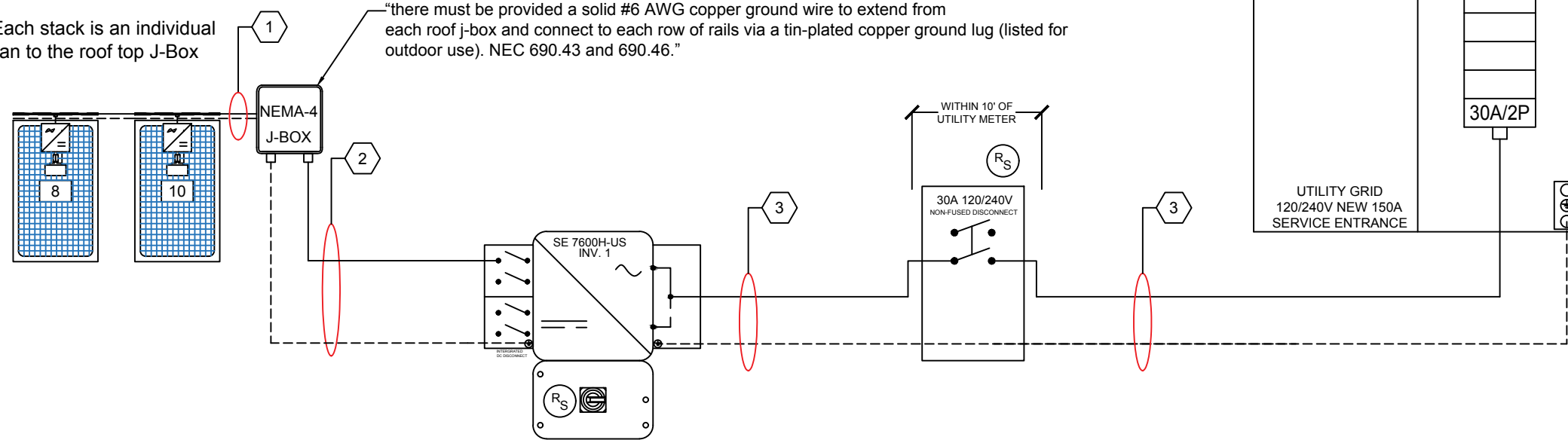


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SHEET #
PV-02
 SCALE: 1/16" = 1'

Note: Each stack is an individual string ran to the roof top J-Box

"there must be provided a solid #6 AWG copper ground wire to extend from each roof j-box and connect to each row of rails via a tin-plated copper ground lug (listed for outdoor use). NEC 690.43 and 690.46."



NEW MAIN PANEL

INTERCONNECTION

PCC MADE IN NEW EXTERIOR 240VAC, 150AAC 1 PHASE METER MAIN PANEL WITH LOAD SIDE CONNECTION USING (1) 30AAC 2 POLE SOLAR BREAKER RATED FOR BACKFEED. THIS CONNECTION SHALL BE MADE IN CONFORMANCE WITH 2020 NEC 705.12(D)(2). BREAKER TO BE LOCATED ON EMPTY SPACE ON 150AAC BUS BAR WITH 100AAC MAIN BREAKER. ((150AAC X 1.2)-100AAC = 80AAC ALLOWABLE SOLAR).

PV AC OUTPUT

AC OUTPUT CURRENT	21
NOMINAL AC VOLTAGE	240 VOLTS

PV DC STRING INVERTER INPUT

MAXIMUM VOLTAGE	500V
MAXIMUM CIRCUIT CURRENT	20A
MAX RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER AND OR DC-TODC CONVERTER (IF INSTALLED)	15A

MODULE SPECIFICATIONS

MANUFACTURER	HANWHA
MODEL	Q-CELL
MAX POWER-POINT CURRENT (IMP)-AMPS	10.01
MAX POWER-POINT VOLTAGE (VMP)-VOLTS	34.97
OPEN CIRCUIT VOLTAGE (VOC)-VOLTS	41.21
SHORT CIRCUIT CURRENT (ISC)-AMPS	10.51
MAX SERIES FUSE (OCPD)-AMPS	20
MAX POWER (P _{MAX})	350 WATTS
MAX VOLTAGE (V _{DC})	1000

INVERTER SPECIFICATIONS

MANUFACTURER	SOLAREEDGE
MODEL	SE5000H-US
MAX DC INPUT VOLTAGE	480 VDC
MAX OUTPUT POWER	5000 W
MAX DC INPUT POWER	7750 W
NOMINAL AC OUTPUT VOLTAGE	240 VAC
NOMINAL AC OUTPUT CURRENT	21 A
MAX FUSE (OCPD)	30 A

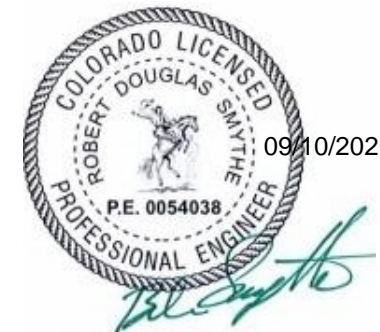
RS RAPID SHUTDOWN COMPLIANCE DEVICE

Notes:

1. This system meets the requirements of NEC 690.41
2. The DC conductors are not bonded to ground and the inverters do not require a GEC.
3. NEC 690.43(C) Structure as Equipment Grounding Conductor allows for equipment to be used as the EGC in a photovoltaic system.
4. The devices listed and identified for grounding the equipment may be stand-alone grounding components or UL-2703 listed mounting hardware. Modules are bonded to the racking with listed and approved grounding components.
5. Equipment operating 150 volts or greater shall only be serviced or replaced by qualified personnel. Field protection may be in the form of conduit, closed cabinet or an enclosure which require use of tools to open.
6. Solar Photovoltaic System equipment will be installed in accordance with the requirements of Art. 690 of the 2020 NEC.
7. Local utility provider shall be notified prior to use and activation of any solar photovoltaic installation.
8. All solar modules, equipment, and metallic components are to be grounded in accordance with code and the manufacturer's installation instructions.
9. Wiring must be permanently and completely held off of the roof surface per NEC 110.2, 110.3(A), 110.3(B) & 300.4

CONDUIT AND CONDUCTOR SCHEDULE

TAG#	DESCRIPTION
1	FREE AIR #10 AWG PV WIRE #6 BARE COPPER EG
2	(1) 3/4" EMT, (4) #10 AWG PV WIRE, (1) #10 THWN-2 EG
3	(1) 3/4" EMT, (3) #10 THWN-2, (1) #10 THWN-2 EG



09/09/2021

DATE:

DESIGNER:

J. SULLIVAN

SYSTEM SIZE:

6300 WATTS

AHJ:

Greeley

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2414 ASH AVE
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SHEET #

PV-03

SCALE: N.T.S

ALL SIGNAGE MUST BE PERMANENTLY ATTACHED AND BE WEATHER RESISTANT/SUNLIGHT RESISTANT AND CANNOT BE HAND-WRITTEN

NOTICE
PV SYSTEM COMBINER PANEL
DO NOT ADD LOADS
TO THIS PANEL

LOCATED ON MULTI BRANCH PV SUB-PANEL

**WARNING: PHOTOVOLTAIC
POWER SOURCE**

CONDUITS, ENCLOSURES, OR MC Cable THAT CONTAIN DC CIRCUITS EVERY 10'

**RAPID SHUTDOWN SWITCH
FOR SOLAR PV SYSTEM**

LOCATED AT RAPID SHUTDOWN DISCONNECT NEC 690.56(C)(3)

MAXIMUM VOLTAGE	500V
MAXIMUM CIRCUIT CURRENT	20A
MAX RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER OR DC-TO-DC CONVERTER (IF INSTALLED)	15A

LOCATED ON STRING INVERTER (IF USED) NEC 690.53

**MAIN PHOTOVOLTAIC
SYSTEM DISCONNECT**

LOCATED AT MAIN PV DISCONNECT NEC 690.13(B)

WARNING
DUAL POWER SUPPLY
SOURCES: UTILITY GRID
AND PV POWER SOURCE
ELECTRIC SYSTEM

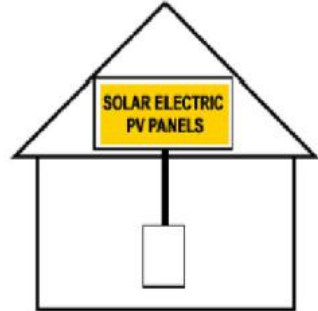
LOCATED AT SERVICE PANEL NEC 705.10

WARNING
INVERTER OUTPUT CONNECTION
DO NOT RELOCATE
THIS OVERCURRENT DEVICE

LOCATED AT PV BREAKER IN PANEL BOARD NEC 705.12(B)(2)(3)(b)

**SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**

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



LOCATED AT SERVICE PANEL NEC 690.56(C)(1)

PHOTOVOLTAIC AC DISCONNECT

RATED AC OUTPUT CURRENT:	21
NOMINAL OPERATING AC VOLTAGE	240V

LOCATED AT SERVICE PANEL BOARD NEC 690.54

**PHOTOVOLTAIC
SYSTEM
CONNECTED**

LOCATED AT MAIN BILLING METER

**PHOTOVOLTAIC
AC
DISCONNECT**

LOCATED AT PV AC DISCONNECT

DATE:	DESIGNER:	SYSTEM SIZE:	WATTS
09/09/2021	J. SULLIVAN	6300	Greeley
AHJ:			

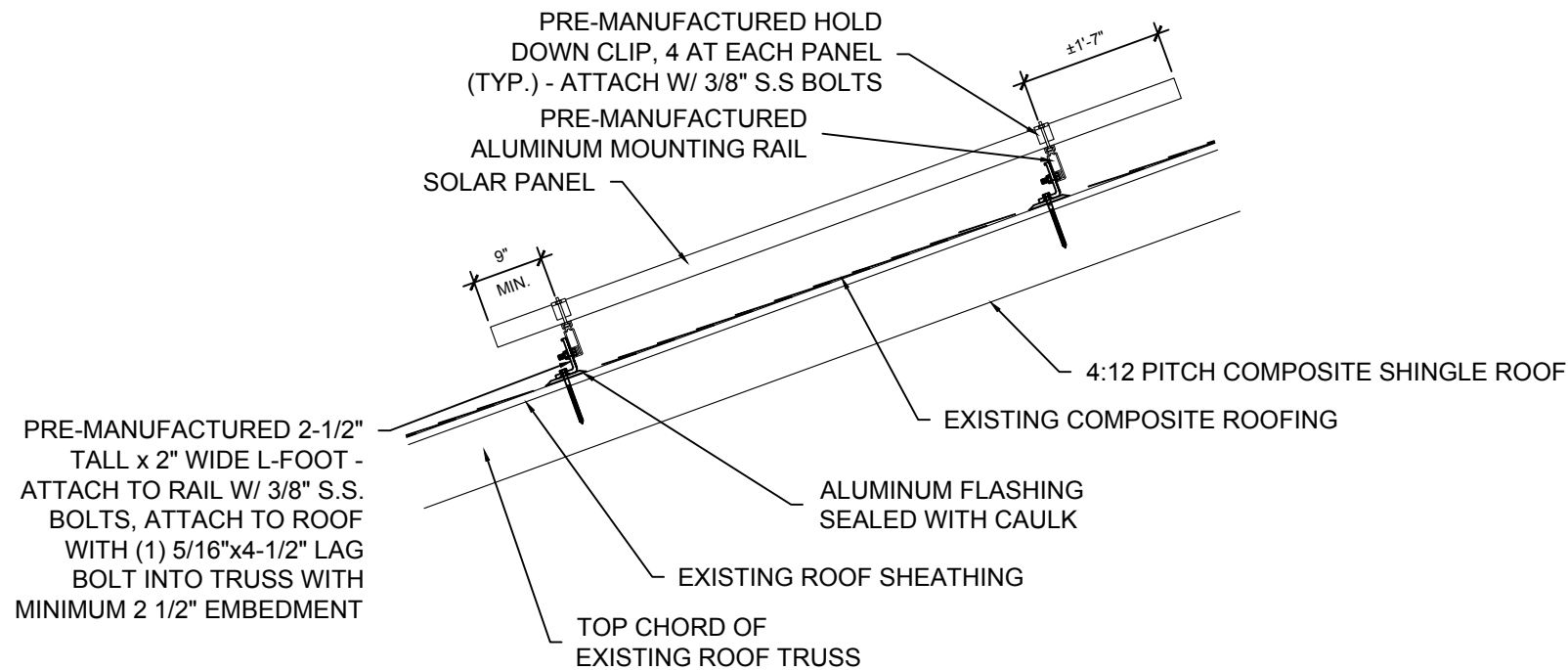
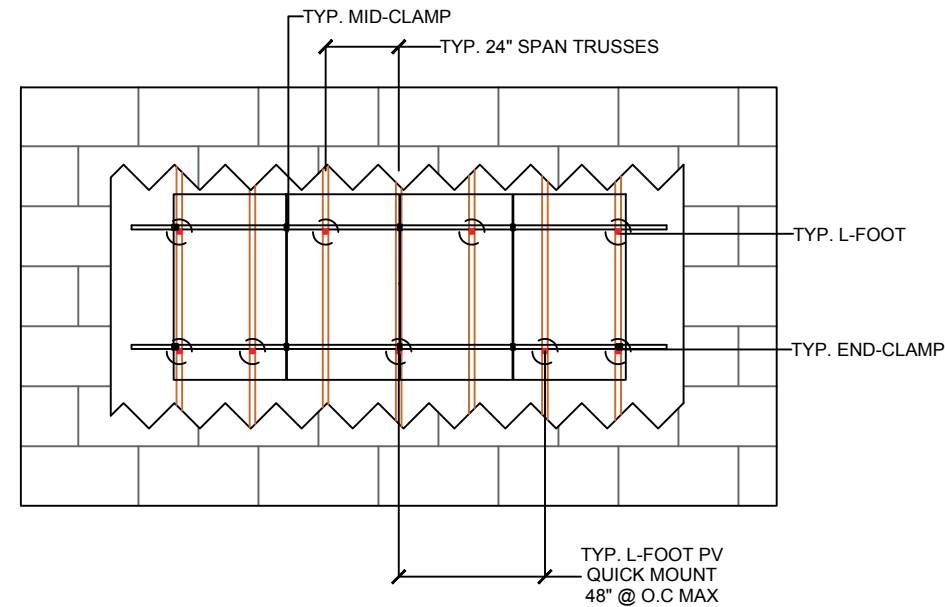
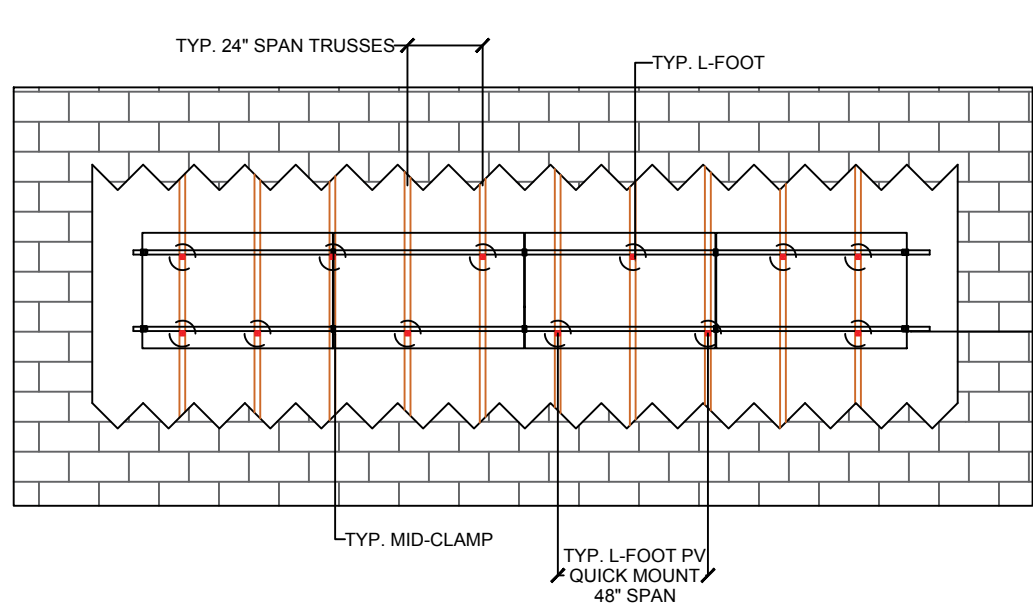
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SHEET #
PV-04
SCALE: N.T.S



FLASHFOOT STANDOFF

FLUSH MOUNTED ARRAY

COMPOSITE SHINGLE

MEETS OR EXCEEDS 2015 IBC IRC CONSTRUCTION STANDARDS CASE 1 Load Calculations 2X4 Construction 24" on Center Trusses

Q-Cells Q.PEAK DUO 310 - 310 WATT PV PANEL: 41.2 LBS/PANEL

IRONRIDGE XR CONNECTION HARDWARE: .735 PLF * 6.66 FT/PANEL = 4.8951 LBS/PANEL

SYSTEM INCLUDES 18 PANELS AND IRONRIDGE MOUNTING HARDWARE: 18 X 41.2 = 741.6 LBS

A = L x W (PANEL): 18.14 SQ FT
 ARRAY: 18.14 SQ FT X 18 = 326.52 x 30 PSF = 9795.6 LBS

PULL OUT STRENGTH CONNECTOR 5/16 LAG BOLT 36 STANDOFFS (36 LAGS) 36 x 2.5" EMBED x 205 LBS = 22140 LBS

ROOF LOAD BEARING 904.86 LBS / 36 STANDOFFS = 25.14 LBS

TOTAL WEIGHT = PANELS + HARDWARE 904.86 LBS 904.86 LBS / 347.4 SQ FT = 2.6 PSF

DATE:	DESIGNER:	SYSTEM SIZE:	AHJ:
09/09/2021	J. SULLIVAN	6300 WATTS	Greeley

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SHEET #
PV-05
SCALE: N.T.S

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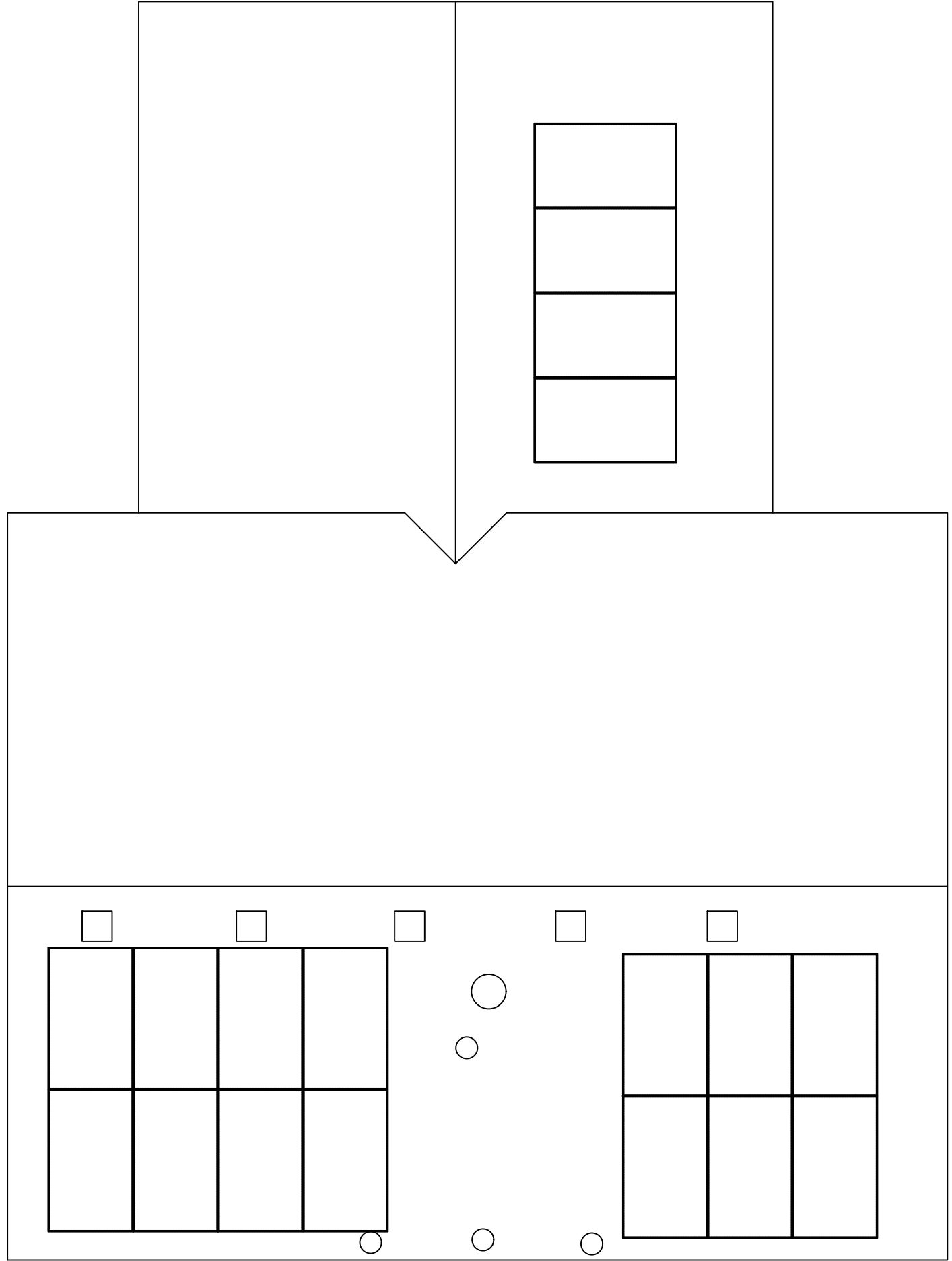


Revisions

MARCO MANUEL RIVAS
2414 ASH AVE
GREELEY, CO 80631

DATE:	09/09/2021
DESIGNER:	J. SULLIVAN
SYSTEM SIZE:	6300 WATTS
AHU:	Greeley

1		13	
2		14	
3		15	
4		16	
5		17	
6		18	
7			
8			
9			
10			
11			
12			



DATE:	09/09/2021
DESIGNER:	J. SULLIVAN
SYSTEM SIZE:	6300 WATTS
AHJ:	Greeley

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powered by

Q.ANTUM DUO

Q.PEAK DUO-G6 340-355

ENDURING HIGH
PERFORMANCE



www.VDEInfo.com
ID: 40032587



Q.ANTUM TECHNOLOGY: LOW LEVELISED COST OF ELECTRICITY

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



INNOVATIVE ALL-WEATHER TECHNOLOGY

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



ENDURING HIGH PERFORMANCE

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



EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (5400Pa) and wind loads (4000 Pa).



A RELIABLE INVESTMENT

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



STATE OF THE ART MODULE TECHNOLOGY

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



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

² See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings



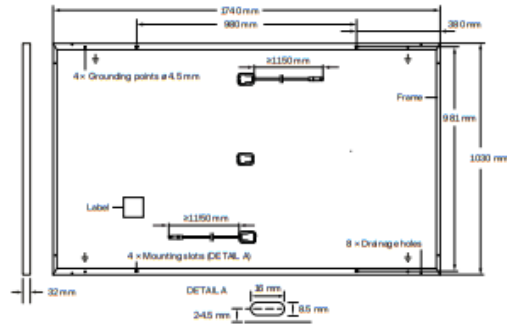
Rooftop arrays on commercial / industrial buildings



Ground-mounted solar power plants

MECHANICAL SPECIFICATION

Format	1740 mm × 1030 mm × 32 mm (including frame)
Weight	19.9 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 × 20 monocrystalline Q.ANTUM solar half cells
Junction box	53-101 mm × 32-60 mm × 15-18 mm Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 1150 mm, (-) ≥ 1150 mm
Connector	Stäubli MC4, Hanwha Q CELLS HGC4, IP68

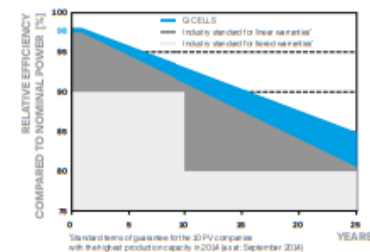


ELECTRICAL CHARACTERISTICS

POWER CLASS		340	345	350	355	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)						
Minimum	Power at MPP ¹	P_{MPP} [W]	340	345	350	355
	Short Circuit Current ¹	I_{SC} [A]	10.68	10.73	10.79	10.84
	Open Circuit Voltage ¹	V_{OC} [V]	40.24	40.49	40.73	40.98
	Current at MPP	I_{MPP} [A]	10.16	10.22	10.27	10.33
	Voltage at MPP	V_{MPP} [V]	33.45	33.76	34.07	34.38
	Efficiency ¹	η [%]	≥ 19.0	≥ 19.3	≥ 19.5	≥ 19.8
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²						
Minimum	Power at MPP	P_{MPP} [W]	254.5	258.2	261.9	265.7
	Short Circuit Current	I_{SC} [A]	8.60	8.65	8.69	8.74
	Open Circuit Voltage	V_{OC} [V]	37.94	38.17	38.41	38.65
	Current at MPP	I_{MPP} [A]	8.00	8.04	8.09	8.13
	Voltage at MPP	V_{MPP} [V]	≤ 1.81	32.10	32.40	32.69

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

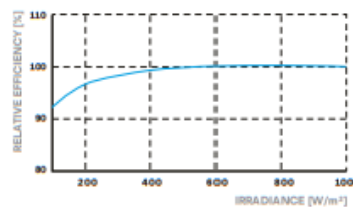
Q CELLS PERFORMANCE WARRANTY



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

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

PERFORMANCE AT LOW IRRADIANCE



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

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α [%/K]	+0.04	Temperature Coefficient of V_{OC}	β [%/K]	-0.27
Temperature Coefficient of P_{MPP}	γ [%/K]	-0.36	Nominal Module Operating Temperature	NMOT [°C]	43 ± 3

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V_{SYS} [V]	1000	PV module classification	Class II
Maximum Reverse Current	I_R [A]	20	Fire Rating based on ANSI/UL 61730	C/TYP 2
Max. Design Load, Push / Pull	[Pa]	3600 / 2667	Permitted Module Temperature on Continuous Duty	-40 °C - +85 °C
Max. Test Load, Push / Pull	[Pa]	5400 / 4000		

QUALIFICATIONS AND CERTIFICATES

VDE Quality Tested,
IEC 61215:2016,
IEC 61730:2016.
This datasheet complies
with DIN EN 50390.



PACKAGING INFORMATION



Horizontal packaging	1780 mm	1080 mm	1208 mm	673.8 kg	28 pallets	26 pallets	32 modules
Vertical packaging	1815 mm	1150 mm	1220 mm	683 kg	28 pallets	24 pallets	32 modules

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product. Q CELLS supplies solar modules in two different stacking methods, depending on the location of manufacture (modules are packed horizontally or vertically). You can find more detailed information in the document "Packaging and Transport Information", available from Q CELLS.

Hanwha Q CELLS GmbH

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Specifications subject to technical changes © Q CELLS Q.PEAK DUO-G6_340-355_2020-04_Rev02_EN

Single Phase Inverter with HD-Wave Technology

for North America

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

12-25
YEAR
WARRANTY



Optimized installation with HD-Wave technology

- / Specifically designed to work with power optimizers
- / Record-breaking efficiency
- / Fixed voltage inverter for longer strings
- / Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- / UL1741 SA certified, for CPUC Rule 21 grid compliance
- / Extremely small
- / Built-in module-level monitoring
- / Outdoor and indoor installation
- / Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)

/ Single Phase Inverter with HD-Wave Technology for North America

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

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

OUTPUT									
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA	
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA	
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac	
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	✓	Vac	
AC Frequency (Nominal)	59.3 - 60 - 60.5 ⁽¹⁾							Hz	
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A	
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5	A	
GFDI Threshold	1							A	
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes								
INPUT									
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W	
Maximum DC Power @208V	-	5100	-	7750	-	-	15500	W	
Transformer-less, Ungrounded	Yes								
Maximum Input Voltage	480							Vdc	
Nominal DC Input Voltage	380				400			Vdc	
Maximum Input Current @240V ⁽²⁾	8.5	10.5	13.5	16.5	20	27	30.5	Adc	
Maximum Input Current @208V ⁽²⁾	-	9	-	13.5	-	-	27	Adc	
Max. Input Short Circuit Current	45							Adc	
Reverse-Polarity Protection	Yes								
Ground-Fault Isolation Detection	600k Ω Sensitivity								
Maximum Inverter Efficiency	99	99.2						%	
CEC Weighted Efficiency	99						99 @ 240V 98.5 @ 208V	%	
Nighttime Power Consumption	< 2.5							W	
ADDITIONAL FEATURES									
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)								
Revenue Grade Data, ANSI C12.20	Optional ⁽³⁾								
Rapid Shutdown - NEC 2014 and 2017 690.12	Automatic Rapid Shutdown upon AC Grid Disconnect								
STANDARD COMPLIANCE									
Safety	UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCI according to T.I.L. M-07								
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (HI)								
Emissions	FCC Part 15 Class B								
INSTALLATION SPECIFICATIONS									
AC Output Conduit Size / AWG Range	1" Maximum / 14-6 AWG				1" Maximum /14-4 AWG				
DC Input Conduit Size / # of Strings / AWG Range	1" Maximum / 1-2 strings / 14-6 AWG				1" Maximum / 1-3 strings / 14-6 AWG				
Dimensions with Safety Switch (HxWxD)	17.7 x 14.6 x 6.8 / 450 x 370 x 174				21.3 x 14.6 x 7.3 / 540 x 370 x 185				in / mm
Weight with Safety Switch	22 / 10	25.1 / 11.4	26.2 / 11.9	38.8 / 17.6				lb / kg	
Noise	< 25				< 50				dBA
Cooling	Natural Convection								
Operating Temperature Range	-13 to +140 / -25 to +60 ⁽⁴⁾ (-40°F / -40°C option) ⁽⁵⁾							°F / °C	
Protection Rating	NEMA 4X (Inverter with Safety Switch)								

⁽¹⁾ For other regional settings please contact SolarEdge support

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

⁽³⁾ Revenue grade inverter P/N: SExxxH-US000NNC2

⁽⁴⁾ For power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf>

⁽⁵⁾ -40 version P/N: SExxxH-US000NNU4

SOLARMOUNT



SOLARMOUNT is the professionals' choice for residential PV mounting applications. Every aspect of the system is designed for an easier, faster installation experience. **SOLARMOUNT** is a complete solution with revolutionary universal clamps, **FLASHKIT PRO**, full system UL 2703 certification and 25-year warranty. Not only is **SOLARMOUNT** easy to install, but best-in-class aesthetics make it the most attractive on any block!



CONCEALED
UNIVERSAL
CLAMPS



OPTIONAL
FRONT TRIM



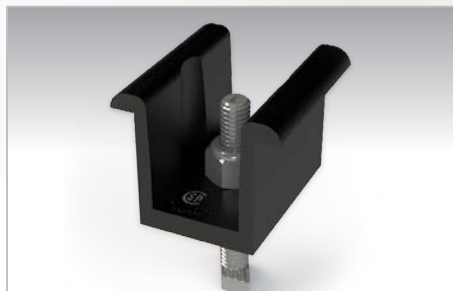
UNIRAC
25
YEAR
FULL-SYSTEM
WARRANTY

New & Improved:
THE PROFESSIONALS' CHOICE
With Superior Aesthetics



NOW FEATURING FLASHKIT PRO

The Complete Roof Attachment Solution
FEATURING **SHED & SEAL** TECHNOLOGY



NOW WITH UNIVERSAL MIDCLAMPS

Accommodates 30mm-51mm module frames
One tool, one-person installs are here!



REVOLUTIONARY NEW ENDCLAMPS

Concealed design and included End Caps

THE PROFESSIONALS' CHOICE FOR RESIDENTIAL RACKING

BEST INSTALLATION EXPERIENCE • CURB APPEAL • COMPLETE SOLUTION • UNIRAC SUPPORT

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

SOLARMOUNT

UNIRAC

BETTER DESIGNS

TRUST THE INDUSTRY'S BEST DESIGN TOOL

Start the design process for every project in our U-Builder on-line design tool. It's a great way to save time and money.

BETTER SYSTEMS

ONE SYSTEM - MANY APPLICATIONS

Quickly set modules flush to the roof on steep pitched roofs. Orient a large variety of modules in Portrait or Landscape. Tilt the system up on flat or low slow roofs. Components available in mill, clear, and dark finishes to optimize your design financials and aesthetics.

BETTER RESULTS

MAXIMIZE PROFITABILITY ON EVERY JOB

Trust Unirac to help you minimize both system and labor costs from the time the job is quoted to the time your teams get off the roof. Faster installs. Less Waste. More Profits.

BETTER SUPPORT

WORK WITH THE INDUSTRIES MOST EXPERIENCED TEAM

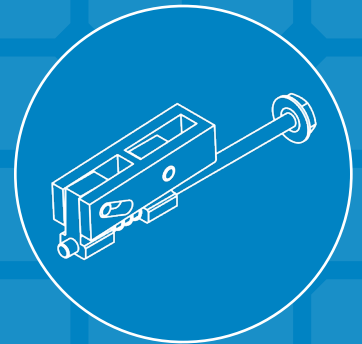
Professional support for professional installers and designers. You have access to our technical support and training groups. Whatever your support needs, we've got you covered. Visit Unirac.com/solarmount for more information.



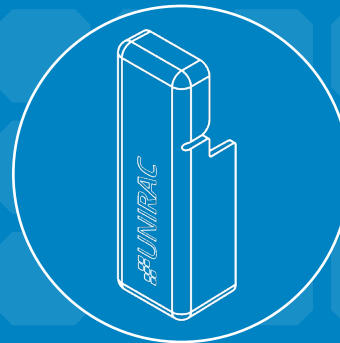
UL2703

BONDING & GROUNDING
MECHANICAL LOADING
SYSTEM FIRE CLASSIFICATION

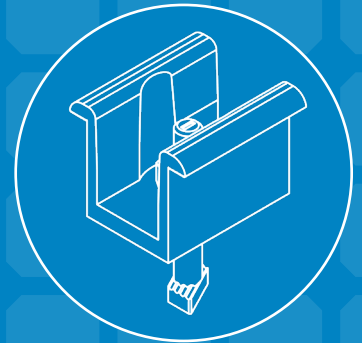
CONCEALED UNIVERSAL ENDCLAMPS



END CAPS INCLUDED
WITH EVERY ENDCLAMP



UNIVERSAL SELF STANDING MIDCLAMPS



U-BUILDER ONLINE DESIGN TOOL SAVES TIME & MONEY

Visit design.unirac.com

UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT



UNMATCHED
EXPERIENCE



CERTIFIED
QUALITY



ENGINEERING
EXCELLENCE



BANKABLE
WARRANTY



DESIGN
TOOLS



PERMIT
DOCUMENTATION

TECHNICAL SUPPORT

Unirac's technical support team is dedicated to answering questions & addressing issues in real time. An online library of documents including engineering reports, stamped letters and technical data sheets greatly simplifies your permitting and project planning process.

CERTIFIED QUALITY PROVIDER

Unirac is the only PV mounting vendor with ISO certifications for 9001:2008, 14001:2004 and OHSAS 18001:2007, which means we deliver the highest standards for fit, form, and function. These certifications demonstrate our excellence and commitment to first class business practices.

BANKABLE WARRANTY

Don't leave your project to chance, Unirac has the financial strength to back our products and reduce your risk. Have peace of mind knowing you are providing products of exceptional quality. SOLARMOUNT is covered by a 25 year limited product warranty and a 5 year limited finish warranty.

ENHANCE YOUR REPUTATION WITH QUALITY RACKING SOLUTIONS BACKED BY ENGINEERING EXCELLENCE AND A SUPERIOR SUPPLY CHAIN

PUB2018AUG31 - PRINTED UPDATE

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

FLASHKIT PRO



FEATURING SHED & SEAL TECHNOLOGY

FLASHKIT PRO is the complete attachment solution for composition shingle roofs. Featuring Unirac's patented **SHED & SEAL** technology, a weather proof system which provides the ultimate protection against roof leaks. Kitted in 10 packs for maximum convenience, flashings and hardware are available in Mill or Dark finishes. With **FLASHKIT pro**, you have everything you need for a quick, professional installation.



TRUSTED WATER SEAL FLASHINGS

FEATURING SHED & SEAL TECHNOLOGY



YOUR COMPLETE SOLUTION

Flashings, lags, continuous slot L-Feet and hardware



CONVENIENT 10 PACKS

Packaged for speed and ease of handling

THE COMPLETE ROOF ATTACHMENT SOLUTION

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

FLASHKIT PRO

INSTALLATION GUIDE



FEATURING SHED & SEAL TECHNOLOGY

FLASHKIT PRO IS THE COMPLETE FLASHING AND ATTACHMENT SOLUTION FOR COMPOSITION ROOFS.



INSTALL FLASHKIT PRO FLASHING



INSTALL L-FOOT



ATTACH L-FOOT TO RAIL

PRE-INSTALL

- Locate roof rafters and snap chalk lines to mark the installation point for each roof attachment.
- Drill a 7/32" pilot hole at each roof attachment. Fill each pilot hole with sealant.

STEP 1 INSTALL FLASHKIT PRO FLASHING

- Add a U-shaped bead of roof sealant to the underside of the flashing with the open side of the U pointing down the roof slope. Slide the aluminum flashing underneath the row of shingles directly up slope from the pilot hole as shown. Align the indicator marks on the lower end of the flashing with the chalk lines on the roof to center the raised hole in the flashing over the pilot hole in the roof. When installed correctly, the flashing will extend under the two courses of shingles above the pilot hole.

STEP 2 INSTALL L-FOOT

- Fasten L-foot and Flashing into place by passing the included lag bolt and pre-installed stainless steel-backed EPDM washer through the L-foot EPDM grommet, and the raised hole in the flashing, into the pilot hole in the roof rafter.

- Drive the lag bolt down until the L-foot is held firmly in place. It is normal for the EPDM on the underside of the stainless steel backed EPDM washer to compress and expand beyond the outside edge of the steel washer when the proper torque is applied.

TIP:

- Use caution to avoid over-torquing the lag bolt if using an impact driver.
- Repeat Steps 1 and 2 at each roof attachment point.

STEP 3 ATTACH L-FOOT TO RAIL

- Insert the included 3/8"-16 T-bolts into the lower slot on the Rail (sold separately), spacing the bolts to match the spacing between the roof attachments.
- Position the Rail against the L-Foot and insert the threaded end of the T-Bolt through the continuous slot in the L-Foot. Apply anti-seize to bolt threads to prevent galling of the T-bolt and included 3/8" serrated flange nut. Place the 3/8" flange nut on the T-bolt and finger tighten. Repeat STEP 3 until all L-Feet are secured to the Rail with a T-bolt. Adjust the level and height of the Rail and torque each bolt to 30ft-lbs.

FASTER INSTALLATION. 25-YEAR WARRANTY.

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Electrical Bonding and Grounding Test Modules

The list below is not exhaustive of compliant modules but shows those that have been evaluated and found to be electrically compatible with the SOLARMOUNT system.

Manufacture	Module Model / Series	Manufacture	Module Model / Series	Manufacture	Module Model / Series
Aleo	P-Series & S-Series	Centrosolar America	C-Series & E-Series	Jinko	JKM & JKMS Series
Aptos Solar	DNA-120-(MF/BF)23 DNA-144-(MF/BF)23 DNA-120-MF26 DNA-144-MF26	CertainTeed	CT2xxMxx-01, CT2xxPxx-01, CTxxxMxx-01, CTxxxPxx-01, CTxxxMxx-02, CTxxxMxx-03 CTxxxMxx-04, CTxxxHC11-04	Kyocera	KD-F & KU Series
Astronergy	CHSM6612 M, M/HV CHSM6612P Series CHSM6612P/HV Series CHSM72M-HC,	Eco Solargy	Orion 1000 & Apollo 1000	LG Electronics	LGxxx(E1C/E1K/N1C/N1K/N2T/N2W/S1C/ S2W/Q1C/Q1K)-A5 LGxxx(A1C/M1C/M1K/N1C/N1K/Q1C/Q1K/ QAC/QAK)-A6 LGxxxN2W-B3 LGxxx(N2T/N2W)-E6 LGxxx(N1C/N1K/N2W/S1C/S2W)-G4 LGxxxN2T-J5 LGxxx(N1K/N2T/N2W)-L5 LGxxx(M1C/N1C)-N5 LGxxx(N1C/N1K/N2W/Q1C/Q1K)-V5
Auxin	AXN6M610T, AXN6P610T, AXN6M612T AXN6P612T	ET Solar	ET AC Module, ET Module		
Axitec	AC-xxx(M/P)/60S, AC-xxx(M/P)/72S AC-xxxP/156-60S AC-xxxMH/120(S/V/SB/VB) AC-xxxMH/144(S/V/SB/VB)	Flextronics	FXS-xxxBB		
Boviet	BVM6610, BVM6612	GCL	GCL-P6 & GCL-M6 Series		
BYD	P6K & MHK-36 Series	Hanwha SolarOne	HSL 60		
Canadian Solar	CS1(H/K/U)-MS CS3K-(MB/MB-AG/MS/P/P HE/PB-AG) CS3L-(MS/P) CS3U-(MB/MB-AG/MS/P/P HE/PB/PB-AG) CS3W-(MS/P/P-PB-AG) CS5A-M CS6K-(M/MS/MS AllBlack/P/P HE) CS6P-(M/P) CS6U-(M/P/P HE) CS6X-P CSX-P ELPS CS6(A/P)-MM	Hansol	TD-AN3, TD-AN4, UB-AN1, UD-AN1	LONGi	LR4-60(HPB/HPH) LR4-72(HPH) LR6-60 LR6-60(BK/HPB/HPH/HV/PB/PE/PH) LR6-72 LR6-72(BK/HV/PB/PE/PH) RealBlack LR4-60HPB RealBlack LR6-60HPB
		Heliene	36M, 36P 60M, 60P, 72M & 72P Series		
		HT Solar	HT72-156(M/P), HT72-156P-C, HT72-156P(V)-C HT72-156M(PDV)-BF, HT72-156M(PD)-BF HT60-156M-C, HT60-156M(V)-C		
		Hyundai	KG, MG, RW, TG, RI, RG, TI, KI, HI Series HiD-SxxxRG(BK), HiS-S400PI		
		ITEK	iT-SE Series		
		Japan Solar	JPS-60 & JPS-72 Series	Mission Solar Energy	MSE Mono, MSE Perc
		JA Solar	JAP6 60-xxx, JAM6(K)-60/xxx, JAP6(k)-72-xxx/4BB, JAP72SY-xxx/ZZ, JAP6(k)-60-xxx/4BB, JAP60SY-xxx/ZZ, JAM6(k)-72-xxx/ZZ, JAM72SY-xxx/ZZ, JAM6(k)-60-xxx/ZZ, JAM60SY-xxx/ZZ. i. YY: 01, 02, 03, 09, 10 ii. ZZ: SC, PR, BP, HiT, IB, MW YY = Backsheet, ZZ Cell technology	Mitsubishi	MJE & MLE Series
				Neo Solar Power Co.	D6M Series
				Panasonic	VBHNxxxSA06/SA06B/SA11/SA11B VBHNxxxSA15/SA15B/SA16/SA16B, VBHNxxxKA, VBHNxxxKA03/04, VBHNxxxSA17/SA17G/SA17E/SA18/SA18E, VBHNxxxZA01/ZA02/ZA03/VBHNxxxZA04 EVPV
				Peimar	SGxxxM (FB/BF)

- The frame profile must not have any feature that might interfere with the bonding devices that are integrated into the racking system
- Use with a maximum over current protection device OCPD of 30A
- Please see the SM UL2703Construction Data Report at Unirac.com to ensure the exact solar module selected is approved for use with SM
- **Listed models can be used to achieve a Class A fire system rating, for steep slope applications, only when modules fire typed 1, 2, 3, or 10. See appendix A, page A**

Electrical Bonding and Grounding Test Modules

The list below is not exhaustive of compliant modules but shows those that have been evaluated and found to be electrically compatible with the SOLARMOUNT system.

Manufacture	Module Model / Series
Phono Solar	PSxxxM1-20/U PSxxxM1H-20/U PSxxxM1-20UH PSxxxM1H-20UH PSxxxM1-20/UH PSxxxM1H-20/UH PSxxxM-24/T PSxxxMH-24/T PSxxxM-24/TH PSxxxMH-24/TH
Q.Cells	Plus, Pro, Peak, G3, G4, Peak G5(SC) , G6(+)(SC)(AC), G7, G8(+), Plus, Pro, Peak L-G2, L-G4, L-G5 Peak L-G5, L-G6, L-G7, L-G8(BFF), ML-G9(+)
REC	RECxxxTP72, RECxxxTP RECxxxPE72, RECxxxPE RECxxxTP2S(M)72, RECxxxTP2 BLK2, RECxxxTP2(M) RECxxxNP (N-PEAK) RECxxxAA(BLK)
Renesola	All 60-cell modules
Risen	RSM Series

Manufacture	Module Model / Series
S-Energy	SN72 & SN60 Series
Seraphim	SEG-(6PA/6PB/6MA/6MA-HV/6MB/E01/E11) SRP-(6QA/6QB) SRP-xxx-6MB-HV, SRP-320-375-BMB-HV, SRP-xxx-BMC-HV, SRP-390-450-BMA-HV, SRP-xxx-BMZ-HV, SRP-390-405-BMD-HV
Sharp	NU-SA & NU-SC Series
Silfab	SLA-M, SLA-P, SLG-M, SLG-P & BC Series SILxxx(BL/NL/NT/HL/ML/BK/NX/NU/HC)
Solaria	PowerXT-xxxR-(AC/PD/BD) PowerXT-xxxC-PD PowerXT-xxxR-PM (AC)
Solartech	STU HJT, STU PERC & Quantum PERC
SolarWorld	Sunmodule Protect, Sunmodule Plus/Pro
Suntech	STP
Suniva	MV Series & Optimus Series (35mm)
Sun Edison	F-Series, R-Series
SunPower	AC, X-Series, E-Series & P-Series
Talesun	TP572, TP596, TP654, TP660, TP672, Hipor M, Smart

Manufacture	Module Model / Series
Tesla	SC, SC B, SC B1, SC B2
Trina	PA05, PD05, DD05, DD06, DE06 PD14, PE14, DD14, DE14, DE15
TSMC	TS-150C2 CIGSw
Upsolar	UP-MxxxP, UP-MxxxM(-B)
URE	D7MxxxH8A, D7KxxxH8A, D7MxxxH7A, D7KxxxH7A
Vikram	Eldora, Somera, Ultima
VSUN	VSUNxxx-60M-BB, VSUNxxx-72MH VSUN4xx-144BMH
Vina	VNS-72M1-5-xxxW-1.5, VNS-72M3-5-xxxW-1.5, VNS-144M1-5-xxxW-1.5, VNS-144M3-5-xxxW-1.5, VNS-120M3-5-xxxW-1.0
Winaico	WST & WSP Series
Yingli	YGE & YLM Series

- The frame profile must not have any feature that might interfere with the bonding devices that are integrated into the racking system
- Use with a maximum over current protection device OCPD of 30A
- Please see the SM UL2703Construction Data Report at Unirac.com to ensure the exact solar module selected is approved for use with SM
- **Listed models can be used to achieve a Class A fire system rating, for steep slope applications, only with module fire typed 1, 2, 3, or 10. See appendix A, page A**

PV PHOTOVOLTAIC WIRE

2000 VOLT EPR - COPPER

APPLICATIONS Suitable for use as follows:

- For use in solar power applications
- Rated 90°C for exposed or concealed wiring in wet or dry locations
- Rated for direct burial

SPECIFICATIONS

- Stranded copper conductors
- EPR insulation
- UL Subject 4703
- UL 44
- Meets the requirement of UL 854 for TYPE USE-2

CONSTRUCTION

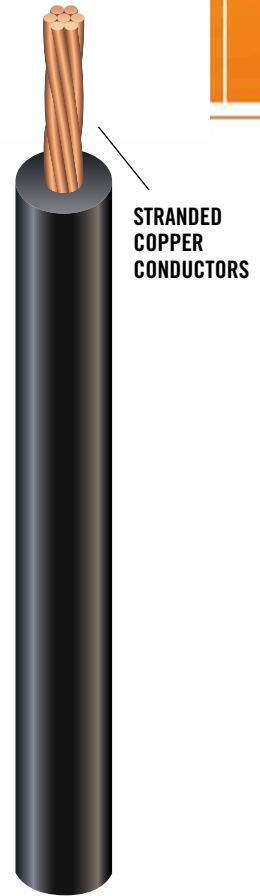
- Southwire PV Photovoltaic Wire is manufactured using stranded copper conductors with single layer EPR insulation
- Bare or Tinned Conductors
- -40°C to +90°C
- Sunlight Resistant
- RoHS Compliant
- Sample Print Legend:

SOUTHWIRE E316464 (0) (UL) AWG 10 (5.26mm²) CU TYPE PV WIRE 2000V 90C WET OR DRY (-40C) SUN RES VW-1 OR RHW-2 2000V — RoHS

WEIGHTS, MEASUREMENTS AND PACKAGING

SIZE (AWG)	NUMBER OF STRANDS	INSULATION THICKNESS (inch)	NOMINAL O.D. (inch)	NET WEIGHT (lbs)
14	19	0.075	0.220	31.9
12	19	0.075	0.237	41.3
10	19	0.075	0.261	56.6
8	19	0.085	0.312	85.7
14	7	0.075	0.220	31.9
12	7	0.075	0.237	41.3
10	7	0.075	0.261	56.6
8	7	0.085	0.312	85.7

Other sizes and strand configurations are available upon request.



PV PHOTOVOLTAIC WIRE
600 VOLT / 2000 VOLT EPR - COPPER

Bare or Tinned
Stranded Copper
Conductors

EPR Insulation

-40°C to +90°C

2000 Volt



greenSpec[®]
RoHS Compliant