GENERAL NOTES

1. INSTALLATION OF SOLAR PHOTOVOLTAIC SYSTEM SHALL BE IN ACCORDANCE WITH NEC ARTICLE 690, AND ALL OTHER APPLICABLE NEC CODES WHERE NOTED OR EXISTING.
2. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL COMPLY WITH NEC ARTICLE 110.
3. ALL WIRES, INCLUDING THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE IN ACCORDANCE WITH NEC ARTICLE 250
4. THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE; THIS SYSTEM IS UTILITY INTERACTIVE PER UL 1741 AND DOES NOT INCLUDE STORAGE BATTERIES OR OTHER ALTERNATIVE STORAGE SOURCES.
5. ALL DC WIRES SHALL BE SIZED ACCORDING TO [NEC 690.8]
6. DC CONDUCTORS SHALL BE WITHIN PROTECTED RACEWAYS IN ACCORDANCE WITH [NEC 690.31]
7. ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL JURISDICTIONAL BUILDING CODE.

NC

Yurianto Yurianto

Digitally signed by Yurianto Yurianto
DN: cn=Yurianto Yurianto, c=US, o=Unaffiliated, ou=A01410D0000017E807CBF250000A722
Reason: I am the author of this document
Location:
Date: 2022-01-25 07:34-06:00

NORTH CAROLINA PROFESSIONAL SEAL 048717 ENGINEER YURIANTO YURIANTO

By Yuri at 7:33:35 AM, 1/25/2022

AERIAL VIEW

SHEET INDEX

Cutsheets

GAF ENERGY

APPLICABLE CODES:

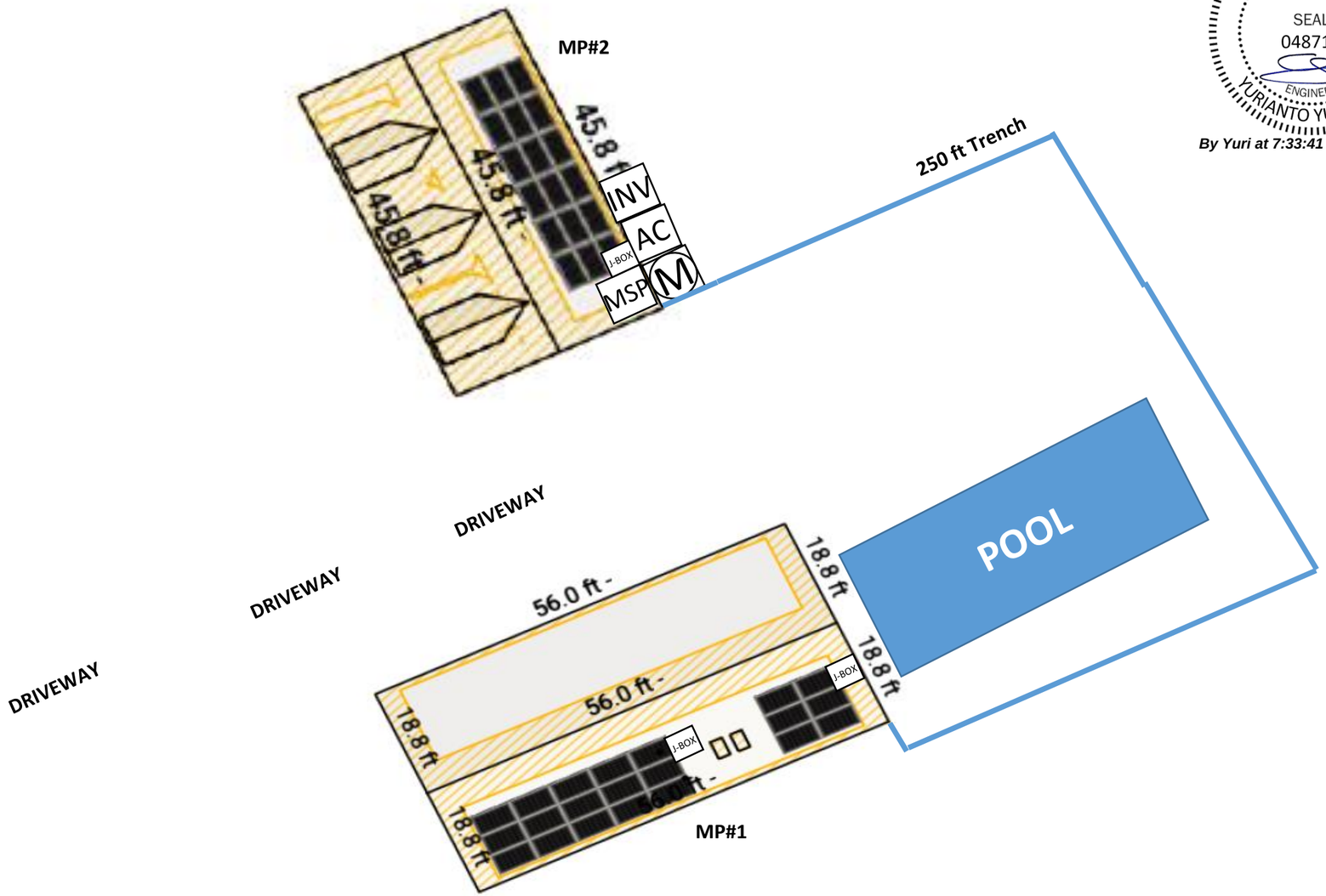
2017 NORTH CAROLINA ELECTRICAL CODE
2018 NORTH CAROLINA BUILDING CODE
2018 NORTH CAROLINA FIRE CODE
2018 NORTH CAROLINA RESIDENTIAL CODE

DESCRIPTION OF DESIGN:

INSTALLATION OF GRID TIED, UTILITY INTERACTIVE PHOTOVOLTAIC SYSTEM.

EQUIPMENT: DC SYSTEM SIZE: 14.04 KW (39) PV Modules: Solaria PowerXT 360R-PD
AC SYSTEM SIZE: 11.4 KW (1) Inverter: SE11400H-US

ADDRESS:	**CONTRACTOR:**	**EQUIPMENT:**	**DATE** 1/24/2022 **REV** B
Ruth Frame	GAF Energy LLC (NC)	14.04 KW (DC) 11.4 KW (AC)	PV1
1296 Young Rd	973.628.3411 125 Mitchell Blvd, Suite D	(39) Solaria PowerXT 360R-PD (1) SolarEdge SE11400H-US (240V)	COVER PAGE
Angier NC 27501	U.33879 San Rafael CA 94903		**BY:** CBennett



NC

NORTH CAROLINA PROFESSIONAL SEAL 048717 ENGINEER YURIANTO YURIANTO

By Yuri at 7:33:41 AM, 1/25/2022

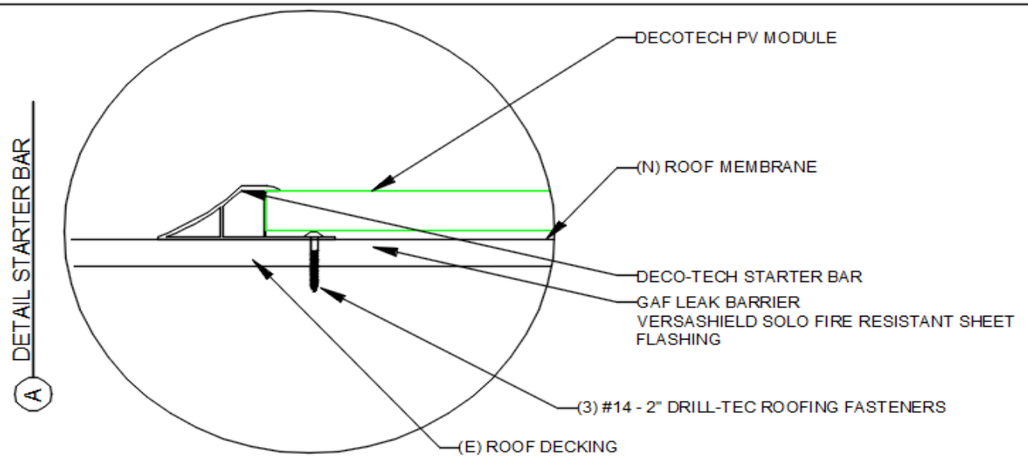
MP#1	Pitch:	8.5	/12
	Azimuth:	154	°
MP#2	Pitch:	9.5	/12
	Azimuth:	65	°

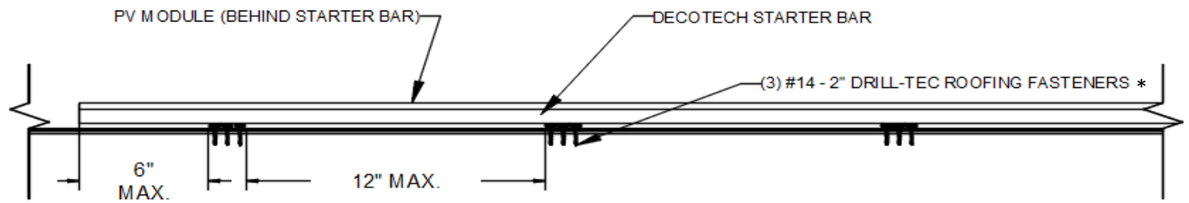
↑ **NORTH**

EQUIPMENT LEGEND

M	UTILITY METER
MSP	MAIN SERVICE PANEL
LC	LOAD CENTER
AC	AC DISCONNECT
PV	METER SOCKET (FOR UTILITY PV METER)
INV	INVERTER
J-BOX	JUNCTION BOX
BAT	BATTERY(IES)
	FIRE ACCESS PATHWAY (3' TYP.)

ADDRESS:	**CONTRACTOR:**	**EQUIPMENT:**	**DATE** 1/24/2022 **REV** B
Ruth Frame	GAF Energy LLC (NC)	14.04 KW (DC) 11.4 KW (AC)	PV2
1296 Young Rd	973.628.3411 125 Mitchell Blvd, Suite D	39 Solaria PowerXT 360R-PD (1) SolarEdge SE11400H-US (240V)	SITE PLAN
Angier NC 27501	U.33879 San Rafael CA 94903		**BY:** CBennett

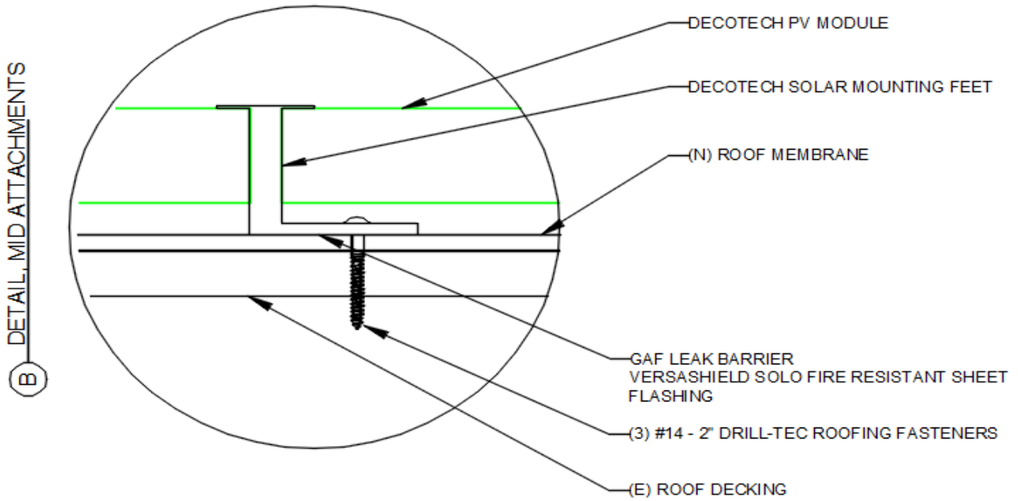


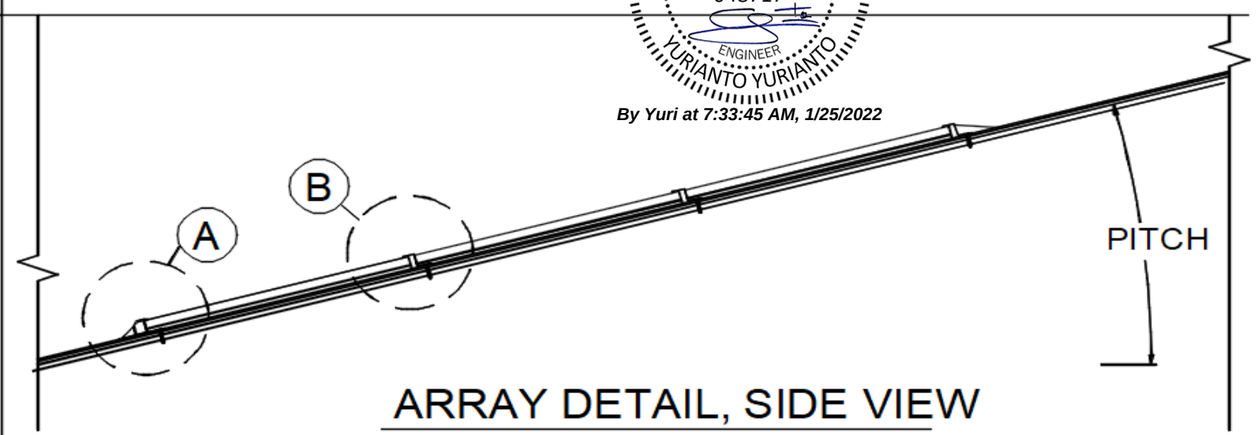


ARRAY DETAIL, FRONT VIEW

NC

By Yuri at 7:33:45 AM, 1/25/2022





ARRAY DETAIL, SIDE VIEW

Roof deck type	* Fasteners per adjustable foot
Plywood	3 fasteners per foot
OSB	6 fasteners per foot

MP1

FRAMING DETAILS	
Rafter Size	2x4
Rafter Spacing	16
Framing Type	Stick Framing

MP2

FRAMING DETAILS	
Rafter Size	2x8
Rafter Spacing	24
Framing Type	Stick Framing

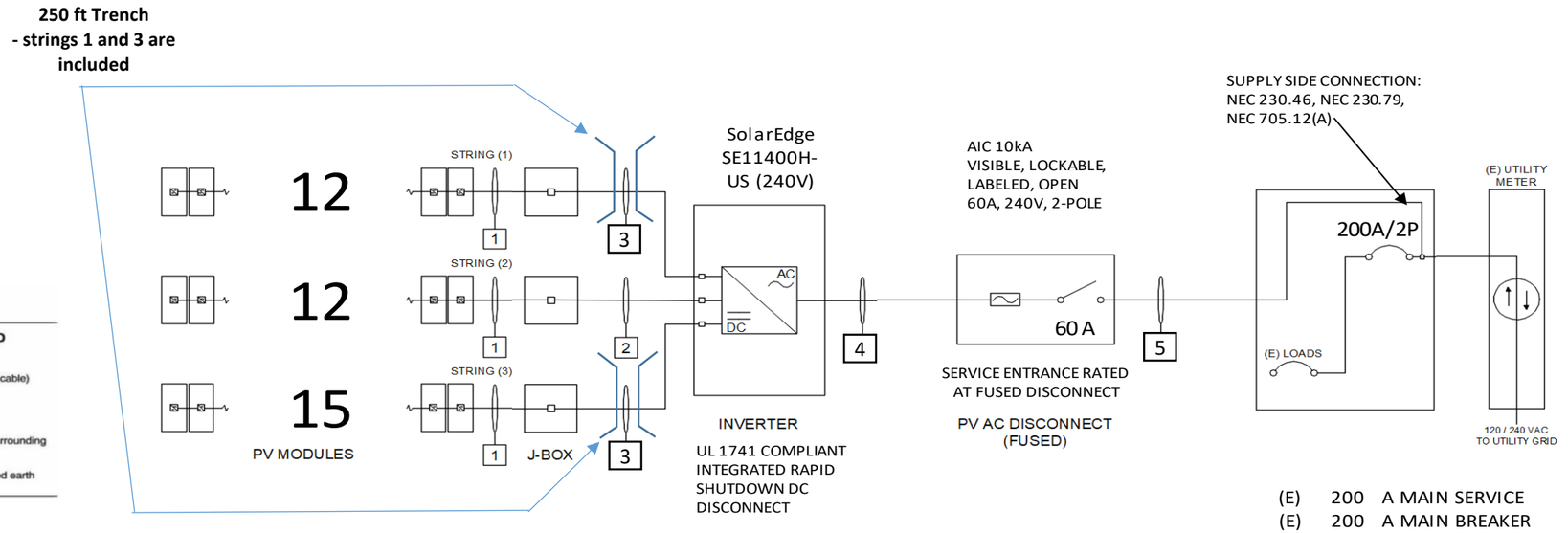
ADDRESS:	CONTRACTOR:	EQUIPMENT:	DATE 1/24/2022 REV B
Ruth Frame	GAF Energy LLC (NC)	14.04 KW (DC) 11.4 KW (AC)	PV3
1296 Young Rd	973.628.3411 125 Mitchell Blvd, Suite D	39 Solaria PowerXT 360R-PD (1) SolarEdge SE11400H-US (240V)	MOUNTING DETAIL
Angier NC 27501	U.33879 San Rafael CA 94903		BY: CBennett

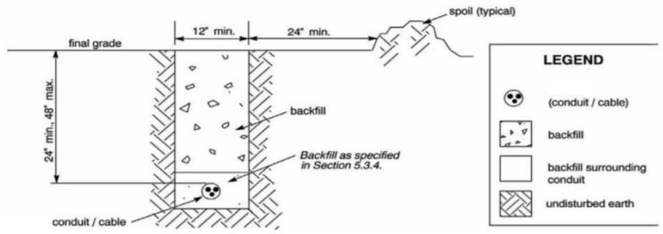
WIRE SCHEDULE

1	(1) #10 AWG PV-WIRE, USE-2 COPPER (POS) (1) #10 AWG PV-WIRE, USE-2 COPPER (NEG) (1) #12 AWG BARE, COPPER (GROUND) (1) 3/4in EMT CONDUIT (OR CODE APPROVED EQUIVALENT)	2	(1) #10 AWG THWN-2 (POS) (1) #10 AWG THWN-2 (NEG) (1) #10 AWG THWN-2 (GND) (1) 3/4in EMT CONDUIT (OR CODE APPROVED EQUIVALENT)	3	(1) #8 AWG THWN-2 (L1) (1) #8 AWG THWN-2 (L2) (1) #8 AWG THWN-2 (NEUT) (1) #10 AWG THWN-2 (GND) (1) 3/4in EMT CONDUIT (OR CODE APPROVED EQUIVALENT)	4	(1) #6 AWG THWN-2 (L1) (1) #6 AWG THWN-2 (L2) (1) #6 AWG THWN-2 (NEUT) (1) #10 AWG THWN-2 (GND) (1) 3/4in ALUMINUM EMT CONDUIT (OR CODE APPROVED EQUIVALENT)	5	(1) #6 AWG THWN-2 (L1) (1) #6 AWG THWN-2 (L2) (1) #6 AWG THWN-2 (NEUT) (1) #10 AWG THWN-2 (GND) (1) 3/4in ALUMINUM EMT CONDUIT (OR CODE APPROVED EQUIVALENT)	6	(OR CODE APPROVED EQUIVALENT)

Vmp (Vdc): 400 **Imp (Adc):** 13.50
Voc (Vdc): 480 **Isc (Adc):** 30.50
V (Vac): 240 **I (Aac):** 47.5

Inverter 1





TYPICAL TRENCH DETAIL

INTERCONNECTION NOTES

1. GROUND FAULT PROTECTION IN ACCORDANCE WITH [NEC 215.9] & [NEC 230.95]
2. SUPPLY SIDE INTERCONNECTION ACCORDING TO[NEC705.12(A)] WITH SERVICE ENTRANCE CONDUCTORS IN ACCORDANCE WITH [NEC 240.21(B)]

DISCONNECT NOTES

1. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING LIVE ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS)
2. AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH

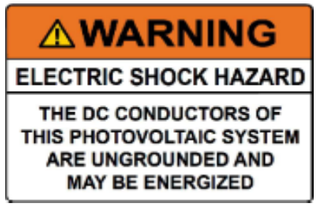
GROUNDING & GENERAL NOTES

1.A SECOND FACILITY GROUNDING ELECTRODE IS NOT REQUIRED PER [NEC 690.47(C)(3)]
2.PV INVERTER IS UNGROUNDED, TRANSFORMER-LESS TYPE.
3.DC GEC AND AC EGC TO REMAIN UNSPLICED, OR SPLICED TO EXISTING ELECTRODE
4.ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL INSPECTION.
5.JUNCTION BOX QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOXES DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE TYPE TRANSITIONS.
6.AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER AC DISCONNECTING MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT.
7.SOLAREDGE INVERTERS WHEN USED WILL INCLUDE RS-485 OR ETHERNET COMMUNICATIONS PORT.

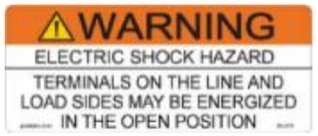
EQUIPMENT SCHEDULE

TYPE	QTY	DESCRIPTION	RATING
PV Modules	(39)	Solaria PowerXT 360R-PD	360W
DC Optimizers	(39)	P370	15Adc
Inverter	(1)	SolarEdge SE11400H-US (240V)	11400W

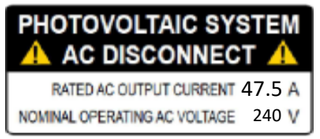
ADDRESS:			CONTRACTOR:				EQUIPMENT:				DATE 1/24/2022	REV B
Ruth Frame			GAF Energy LLC (NC)				14.04	KW (DC)	11.4	KW (AC)	PV4	
1296 Young Rd			973.628.3411	125 Mitchell Blvd, Suite D			39	Solaria PowerXT 360R-PD	(1)	SolarEdge SE11400H-US (240V)	ELECTRICAL DIAGRAM	
Angier	NC	27501	U.33879	San Rafael	CA	94903					BY: CBennett	



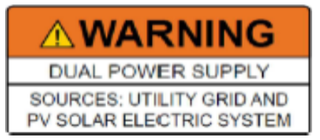
LABEL 1
AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT, AND DEVICE WHERE ENERGIZED UNGROUNDED CONDUCTORS MAY BE EXPOSED DURING SERVICE. NEC. 690.35(F)



LABEL 2
FOR PV DISCONNECTING MEANS WHERE ALL TERMINALS OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION.NEC 690.17(E), NEC 705.22



LABEL 3
AT POINT OF INTERCONNECTION, MARKED AT AC DISCONNECTING MEANS.NEC 690.54, NEC 690.13 (B)

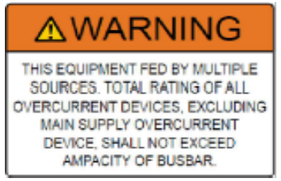


LABEL 4
AT POINT OF INTERCONNECTION FOR EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUTS SUPPLYING POWER TO A BUSBAR OR CONDUCTOR SUPPLIED FROM MULTIPLE SOURCES, EACHSERVICE EQUIPMENT AND ALL ELECTRIC POWER PRODUCTION SOURCE LOCATIONS.NEC 705.12(D)(3

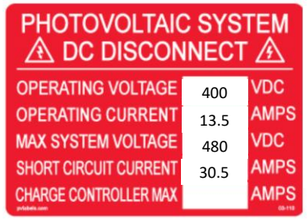
LABEL 5
AT DIRECT-CURRENT EXPOSED RACEWAYS, CABLE TRAYS, COVERS AND ENCLOSURES OF JUNCTION BOXES, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS.NEC 690.31(G)(3&4)

LABEL 6
PLACED ADJACENT TO THE BACK-FED BREAKER FROM THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE CONNECTION TO BUSBAR.NEC 705.12(D)(2)(3)(B)

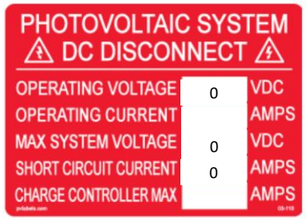
LABEL 7
SIGN LOCATED AT UTILITY SERVICE EQUIPMENT.NEC 690.56(C)



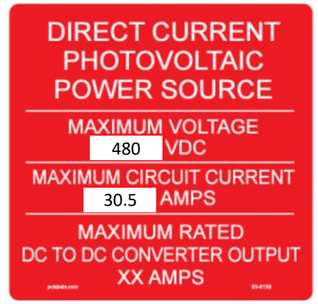
LABEL 8
(ONLY IF 3 OR MORE SUPPLY SOURCES TO A BUSBAR)SIGN LOCATED AT LOAD CENTER IF CONTAINING 3 OR MORE POWER SOURCES. NEC 705.12(D)(2)(3)(C)



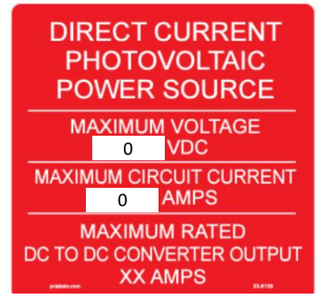
LABEL 9 - INVERTER 1
AT PV DISCONNECTING MEANS. TO BE USED IF NEC 2014 APPLIES. NEC 690.53



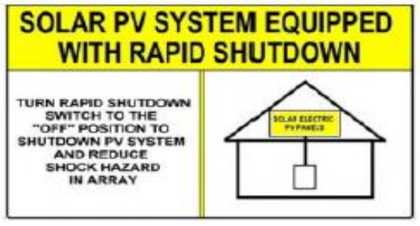
LABEL 9 - INVERTER 2
AT PV DISCONNECTING MEANS. TO BE USED IF NEC 2014 APPLIES. NEC 690.53



LABEL 10 - INVERTER 1
AT PV DISCONNECTING MEANS. TO BE USED IF NEC 2017 APPLIES. NEC 690.53

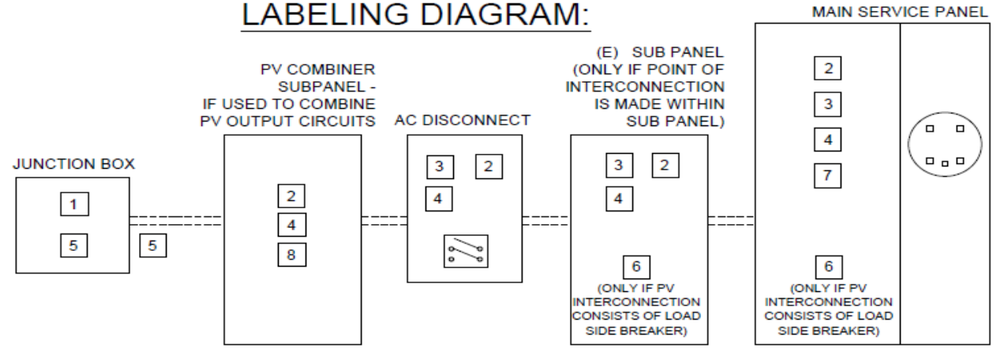


LABEL 10 - INVERTER 2
AT PV DISCONNECTING MEANS. TO BE USED IF NEC 2017 APPLIES. NEC 690.53



LABEL 11
FOR PV SYSTEMS THAT SHUT DOWN THE ARRAY AND CONDUCTORS LEAVING THE ARRAY. CEC 690.56(C)(1)(a)

LABELING DIAGRAM:



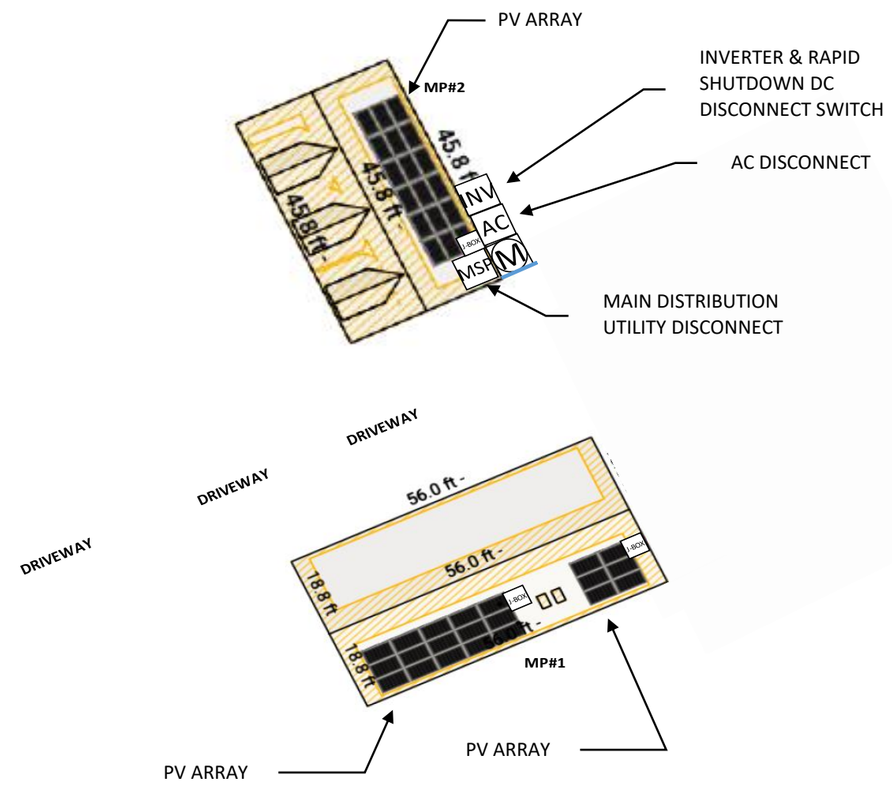
** ELECTRICAL DIAGRAM SHOWN ABOVE IS FOR LABELING PURPOSES ONLY. NOT AN ACTUAL REPRESENATION OF EQUIPMENT AND CONNECTIONS TO BE INSTALLED. LABEL LOCATIONS PRESENTED MAY VERY DEPENDING ON TYPE OF INTERCONNECTION METHOD AND LOCATION PRESENTED ELECTRICAL DIAGRAM PAGE. **

LABELING NOTES:
1. LABELS CALLED OUT ACCORDING TO ALL COMMON CONFIGURATIONS. ELECTRICIAN TO DETERMINE EXACT REQUIREMENTS IN THE FIELD PER CURRENT NEC AND LOCAL CODES AND MAKE APPROPRIATE ADJUSTMENTS.
2. LABELING REQUIREMENTS BASED ON THE (NFPA 70) 2017 National Electric Code
3. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
4. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED [NEC 110.21]
5. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8", WHITE ON RED BACKGROUND; REFLECTIVE, AND PERMANENTLY AFFIXED [IFC 605.11.1.1]

ADDRESS:			**CONTRACTOR:**				**EQUIPMENT:**				**DATE** 1/24/2022	**REV** B
Ruth Frame			GAF Energy LLC (NC)				14.04	KW (DC)	11.4	KW (AC)	PV5	
1296 Young Rd			973.628.3411	125 Mitchell Blvd, Suite D			39	Solaria PowerXT 360R-PD	(1)	SolarEdge SE11400H-US (240V)	LABELS	
Angier	NC	27501	U.33879	San Rafael	CA	94903					**BY:** CBennett	

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM ROOF MOUNTED SOLAR ARRAYS WITH SAFETY DISCONNECTS SHOWN:



1296 Young Rd, Angier NC 27501

ADDRESS:			CONTRACTOR:				EQUIPMENT:				DATE 1/24/2022	REV B
Ruth Frame			GAF Energy LLC (NC)				14.04	KW (DC)	11.4	KW (AC)	PV6	
1296 Young Rd			973.628.3411	125 Mitchell Blvd, Suite D			39	Solaria PowerXT 360R-PD	(1)	SolarEdge SE11400H-US (240V)	PLACARD	
Angier	NC	27501	U.33879	San Rafael	CA	94903					BY: CBennett	

Single Phase Inverter with HD-Wave Technology

for North America

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

INVERTERS

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)

solaredge.com

solaredge

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	600kΩ 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: SExxxxH-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: SExxxxH-US000NNU4

RoHS

Power Optimizer

For North America

P320 / P340 / P370 / P400 / P405 / P505

POWER OPTIMIZER

PV power optimization at the module-level

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

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Power Optimizer

For North America

P320 / P340 / P370 / P400 / P405 / P505

Optimizer model (typical module compatibility)	P320 (for 60-cell modules)	P340 (for high-power 60-cell modules)	P370 (for higher-power 60 and 72-cell modules)	P400 (for 72 & 96-cell modules)	P405 (for thin film modules)	P505 (for higher current modules)	
INPUT							
Rated Input DC Power[1]	320	340	370	400	405	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	48		60	80	125[2]	87[2]	Vdc
MPPT Operating Range	8 - 48		8 - 60	8 - 80	12.5 - 105	12.5 - 87	Vdc
Maximum Short Circuit Current (Isc)	11			10.1		14	Adc
Maximum DC Input Current	13.75			12.5		17.5	Adc
Maximum Efficiency	99.5						%
Weighted Efficiency	98.8					98.6	%
Overvoltage Category	II						
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)							
Maximum Output Current	15						Adc
Maximum Output Voltage	60				85		Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)							
Safety Output Voltage per Power Optimizer	1 ± 0.1						Vdc
STANDARD COMPLIANCE							
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3						
Safety	IEC62109-1 (class II safety), UL1741						
Material	UL94 V-0 , UV Resistant						
RoHS	Yes						
INSTALLATION SPECIFICATIONS							
Maximum Allowed System Voltage	1000						Vdc
Compatible inverters	All SolarEdge Single Phase and Three Phase inverters						
Dimensions (W x L x H)	129 x 153 x 27.5 / 5.1 x 6 x 1.1			129 x 153 x 33.5 / 5.1 x 6 x 1.3	129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	129 x 162 x 59 / 5.1 x 6.4 x 2.3	mm / in
Weight (including cables)	630 / 1.4			750 / 1.7	845 / 1.9	1064 / 2.3	gr / lb
Input Connector	Single or dual MC4[3]						
Input Wire Length	0.16 / 0.52						m / ft
Output Wire Type / Connector	Double Insulated / MC4						
Output Wire Length	0.9 / 2.95		1.2 / 3.9				m / ft
Operating Temperature Range	-40 - +85 / -40 - +185						°C / °F
Protection Rating	IP68 / NEMA6P						
Relative Humidity	0 - 100						%

[1] Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed
[2] NEC 2017 requires max input voltage be not more than 80V
[3] For other connector types please contact SolarEdge

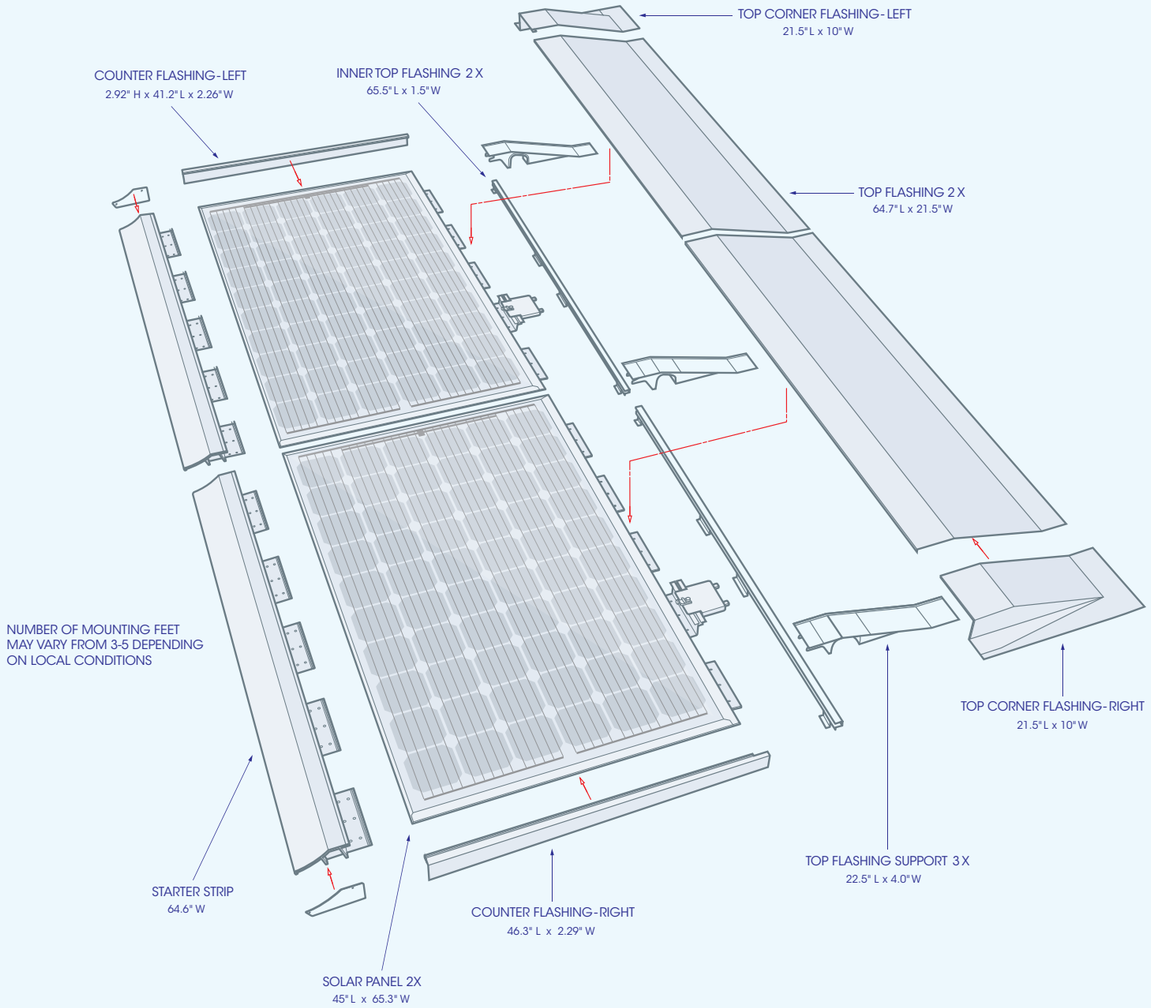
PV System Design Using a SolarEdge Inverter[4][5]		Single Phase HD-Wave	Single phase	Three Phase 208V	Three Phase 480V	
Minimum String Length (Power Optimizers)	P320, P340, P370, P400	8		10	18	
	P405 / P505	6		13 (12 with SE3K)	14	
Maximum String Length (Power Optimizers)		25		25	50[6]	
Maximum Power per String		5700 (6000 with SE7600-US - SE11400-US)	5250	6000[7]	12750[8]	W
Parallel Strings of Different Lengths or Orientations		Yes				

[4] For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string_sizing_na.pdf
[5] It is not allowed to mix P405/P505 with P320/P340/P370/P400 in one string
[6] A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement
[7] For SE14.4KUS/SE43.2KUS: It is allowed to install up to 6,500W per string when 3 strings are connected to the inverter (3 strings per unit for SE43.2KUS) and when the maximum power difference between the strings is up to 1,000W
[8] For SE30KUS/SE33.3KUS/SE66.6KUS/SE100KUS: It is allowed to install up to 15,000W per string when 3 strings are connected to the inverter (3 strings per unit for SE66.6KUS/SE100KUS) and when the maximum power difference between the strings is up to 2,000W

CE RoHS

Solar Energy System

Dimensions



Solar Energy System

Description

The sleek, low-profile design of the GAF Energy solar energy system delivers performance and curb appeal at an affordable price.

Product Installation

Refer to the Application Instructions for details on how to install the GAF Energy solar energy system.

Design Considerations

- GAF Energy solar energy system must be installed in landscape orientation.
- Certified for direct attachment to roof deck. The roof deck must be a minimum of 15/32" thick plywood or 7/16" thick OSB.
- System is installed directly to the roof deck without engaging rafters.
- GAF Energy solar energy system is intended for use solely on roofs having a slope between 4:12 and 12:12.
- DC optimizers and AC inverters can be used.
- Asphalt shingle installations only.

Technical Specifications

Model Number	GAF Solar Energy System
PV Laminate	Solaria PowerXT
Maximum Power under STC* (Pmax)	360 Wp
Open Circuit Voltage under STC (Voc)	47.7 V
Maximum Power Point Voltage under STC (Vmpp)	39.5 V
Short Circuit Current under STC (Isc)	9.56 A
Maximum Power Point Current under STC (Impp)	9.13 A
Module Efficiency under STC (ηm)	19.9%
Temperature Correction Factor TC Voc	-0.29%/C

Cells per module	60
Cell type	Monocrystalline
PV Connector Type	PV wire with MC4 compatible
PV Laminate Front	3.2 mm high transmittance, tempered, ar coating
PV Laminate Back	Multi-layer Polymer Backsheet
Frame	Black Powder Coated Aluminum
Weight	40.0 lb. (22.2 kg)
Operating Temperatures	-40 to +185°F (-40 to +85°C)
Design Loading	50 lb./ft² (244 kg/m²) Positive Design Load
Certifications	PowerXT-360-R-PD-L UL 1703
Fire Rating	UL 2703 Class A

C US c UL US LISTED
UL 2703
PV MOUNTING SYSTEM
E485228

*STC: Standard Test Conditions 1000W/m², 25°C, AM 1.5. For additional parameters and certifications, refer to the latest version of the GAF Energy solar system Application Instructions