GENERAL NOTES		AERIAL VIEW	SHEET INDEX
WHERE NOTED OR EXISTING. 2. PROPER ACCESS AND WORKING CLEARANCE AS ALL WIRES, INCLUDING THE GROUNDING ELECARTICLE 250 4. THE PV MODULES ARE CONSIDERED NON-COBATTERIES OR OTHER ALTERNATIVE STORAGE S. ALL DC WIRES SHALL BE SIZED ACCORDING TO 6. DC CONDUCTORS SHALL BE WITHIN PROTECT 7. ALL SIGNAGE TO BE PLACED IN ACCORDANCE	D [NEC 690.8] ED RACEWAYS IN ACCORDANCE WITH [NEC 690.31] WITH LOCAL JURISDICTIONAL BUILDING CODE.	CLE 110. TH NEC PORAGE TORAGE	PV1 Cover Page PV2 Site Plan PV3 Mounting Detail PV4 Electrical Diagram PV5 Labels PV6 Placard Cutsheets
APPLICABLE COL	DES:	DESCRIPTION OF DESIGN:	
CAF 2018 NORTH CAI	ROLINA ELECTRICAL CODE ROLINA BUILDING CODE ROLINA FIRE CODE ROLINA RESIDENTIAL CODE	INSTALLATION OF GRID TIED, UTILITY INTERACTIVE PHOTOVOLTAIC SYSTEM. EQUIPMENT: DC SYSTEM SIZE: 14.04 KW (39) PV Modules: Solaria Power AC SYSTEM SIZE: 11.4 KW (1) Inverter: SE11400H-US	
ADDRESS:	CONTRACTOR:	EOUIPMENT:	DATE 9/16/2021 RFV 0
ADDRESS: Ruth Frame	CONTRACTOR: GAF Energy LLC (NC)	EQUIPMENT: 14.04 KW (DC) 11.4 KW (AC)	DATE 9/16/2021 REV 0
ADDRESS: Ruth Frame 1296 Young Rd	CONTRACTOR: GAF Energy LLC (NC) 973.628.3411 125 Mitchell Blvd, Suite D	EQUIPMENT: 14.04 KW (DC) (39) Solaria PowerXT 360R-PD (1) SolarEdge SE11400H-US (240V)	DATE 9/16/2021 REV 0 PV1 COVER PAGE

BY: CBennett

U.33879

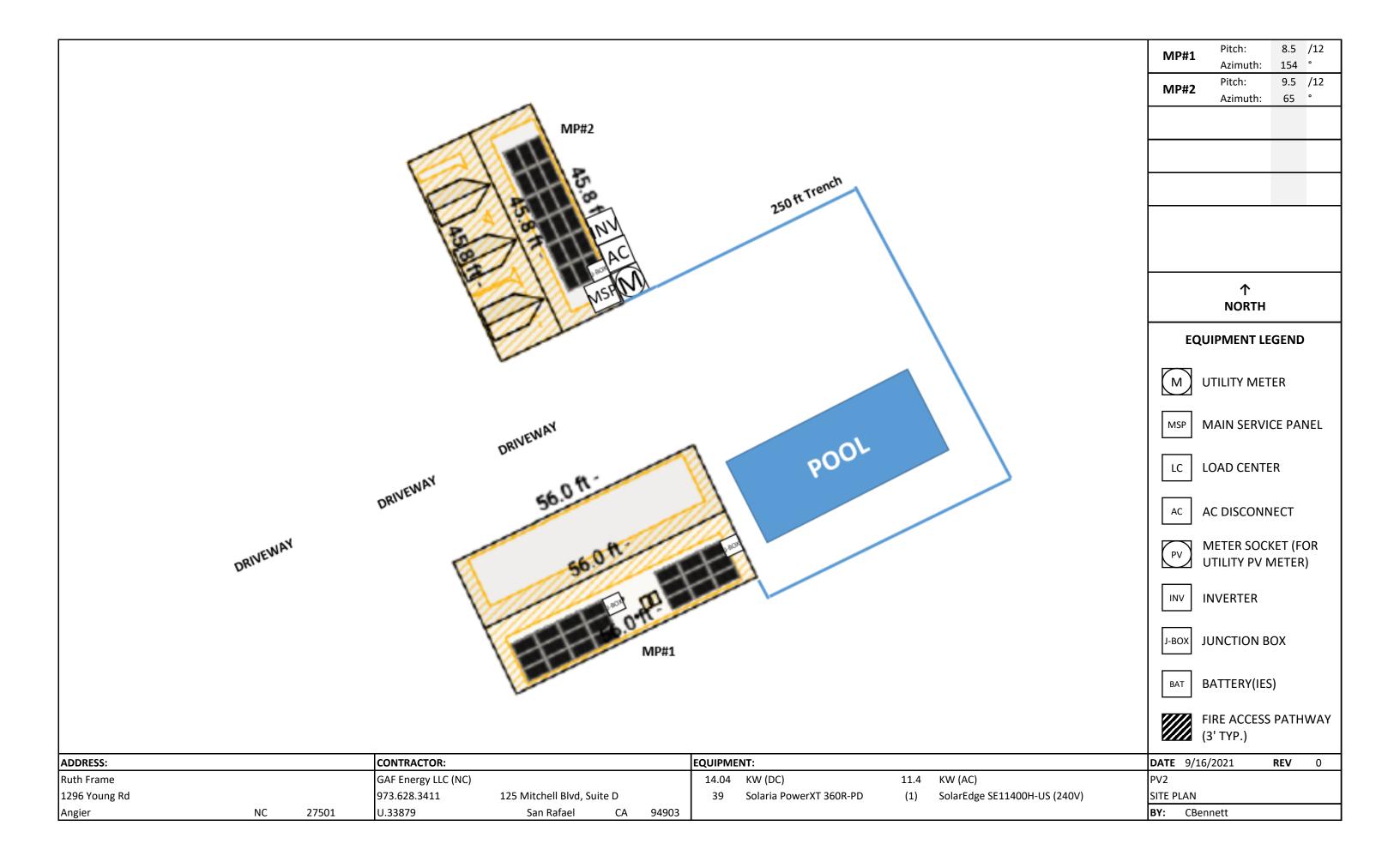
San Rafael

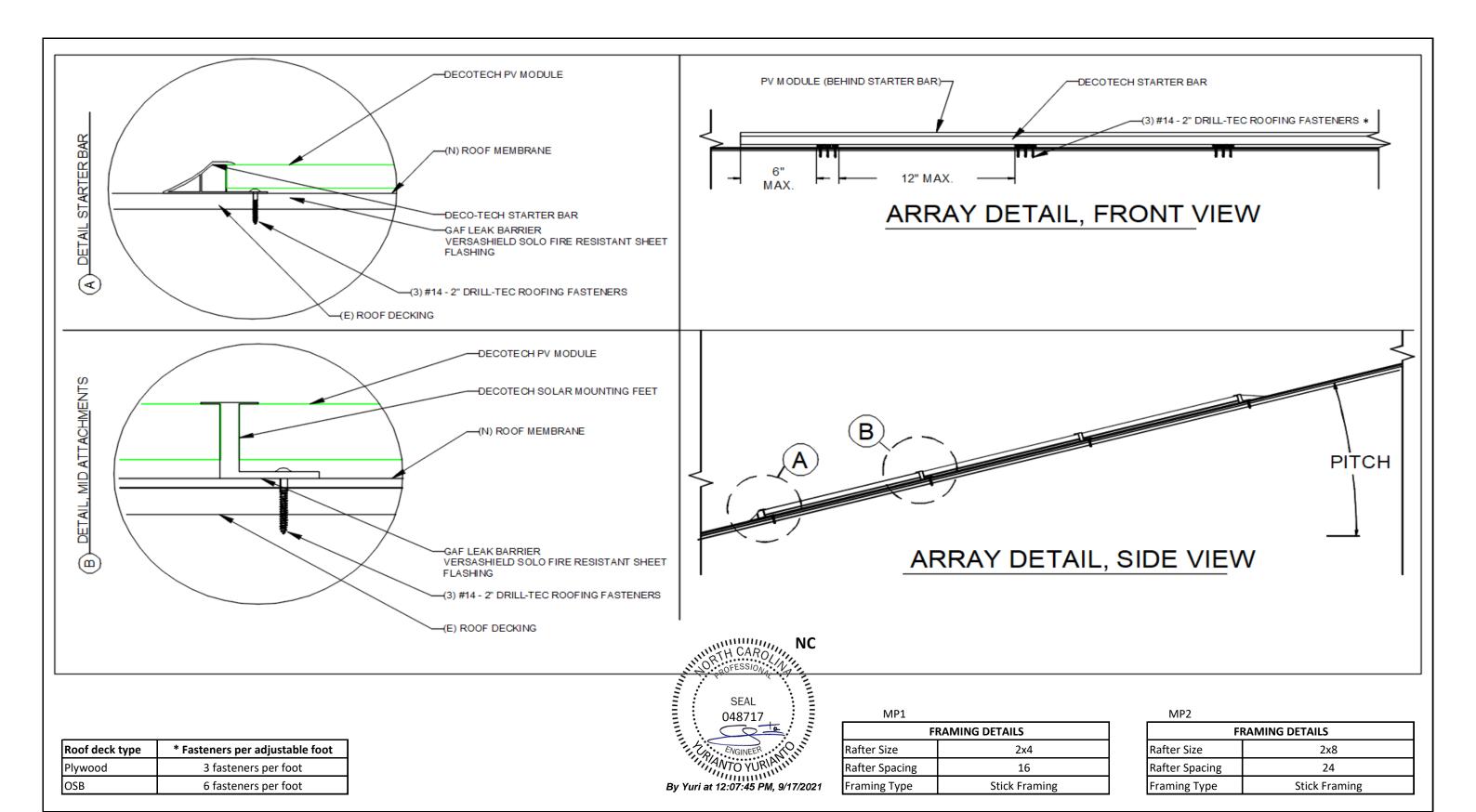
CA 94903

NC

27501

Angier





ADDRESS:			CONTRACTOR:		EQUIPMENT:				DATE 9/16/2021	REV (J		
Ruth Frame			GAF Energy LLC (NC)				14.04	KW (DC)	11.4	KW (AC)	PV3		
1296 Young Rd			973.628.3411	125 Mitchell Blvd, Sui	te 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 SCHEDU	JLE				
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)	2	(1) #10 AWG THWN-2 (POS) (1) #10 AWG THWN-2 (NEG) (1) #10 AWG THWN-2 (GND)		(1) #6 AWG THWN-2 (L1) (1) #6 AWG THWN-2 (L2) (1) #6 AWG THWN-2 (NEUT)	1	(1) #6 AWG THWN-2 (L1) (1) #6 AWG THWN-2 (L2) (1) #6 AWG THWN-2 (NEUT)	Е	6	
1 1	(1) 3/4in EMT CONDUIT		(1) 3/4in EMT CONDUIT	3	(1) #10 AWG THWN-2 (GND) (1) 3/4in EMT CONDUIT	4	(1) #10 AWG THWN-2 (GND) (1) 3/4in ALUMINUM EMT CONDUIT	5	0	
(0	(OR CODE APPROVED EQUIVALENT)		(OR CODE APPROVED EQUIVALENT)		(OR CODE APPROVED EQUIVALENT)		(OR CODE APPROVED EQUIVALENT)	(OR CODE APPROVED EQUIVALENT)		(OR CODE APPROVED EQUIVALENT)

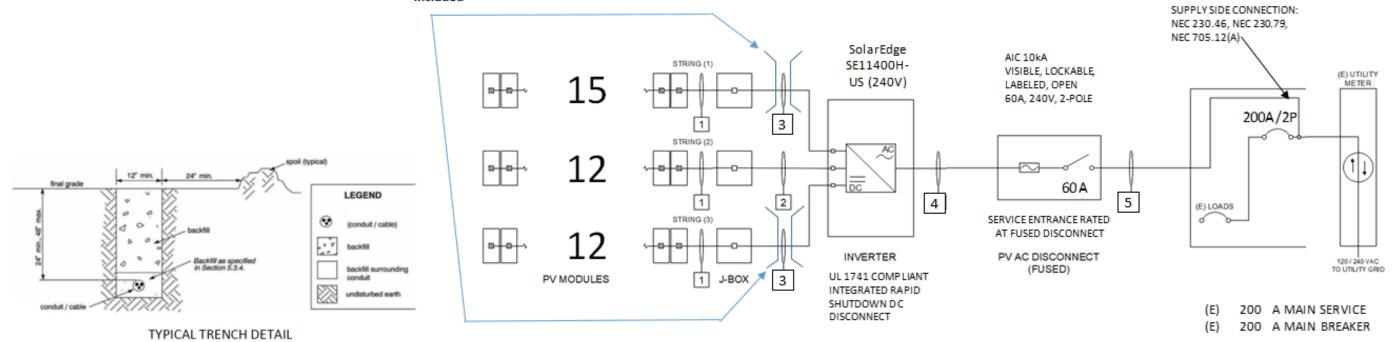
 Vmp (Vdc):
 400
 Imp (Adc):
 13.50

 Voc (Vdc):
 480
 Isc (Adc):
 30.50

 V (Vac):
 240
 I (Aac):
 47.5

 Inverter 1

250 ft Trench - strings 1 and 3 are included



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:	CONTRACTOR:			EQUIPME	EQUIPMENT:				DATE 9/16/2021	REV	0
Ruth Frame			GAF Energy LLC (NC)				14.04	KW (DC)	11.4	KW (AC)		PV4		
1296 Young Rd			973.628.3411	125 Mitchell Blvd, Su	ite D		39	Solaria PowerXT 360R-PD	(1)	SolarEdge SE11400H-US (240V)		ELECTRICAL DIAGRAM		
Angier	NC	27501	U.33879	San Rafael	CA	94903						BY: CBennett		

⚠ **WARNING**

ELECTRIC SHOCK HAZARD

THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED

LABEL 1

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

FOR PV DISCONNECTING MEANS WHERE ALL TERMINALS

LABEL 2

↑ WARNING OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION.NEC 690.17(E), NEC 705.22 ELECTRIC SHOCK HAZARD TERMINALS ON THE LINE AND

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

PHOTOVOLTAIC SYSTEM AC DISCONNECT 👍

LOAD SIDES MAY BE ENERGIZED

..... IN THE OPEN POSITION

RATED AC OUTPUT CURRENT 47.5 A NOMINAL OPERATING AC VOLTAGE 240 V

↑ WARNING

DUAL POWER SUPPLY

SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

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

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL 5

TRAYS, COVERS AND ENCLOSURES OF JUNCTION BOXES, AND OTHER WIRING METHODS: SPACED AT MAXIMUM 10FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS,

AT DIRECT-CURRENT EXPOSED RACEWAYS, CABLE CEILINGS, OR FLOORS.NEC 690.31(G)(3&4)

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]

∕WARNING

INVERTER OUTPUT CONNECTION

DO NOT RELOCATE THIS OVERCURRENT DEVICE

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)

PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

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

⚠WARNING

THIS EQUIPMENT FED BY MULTIPLE SOURCES, TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR.

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)

PHOTOVOLTAIC SYSTEM A DC DISCONNECT A

OPERATING VOLTAGE 400 **OPERATING CURRENT** AMPS 13.5 **VDC** MAX SYSTEM VOLTAGE 480 SHORT CIRCUIT CURRENT **AMPS** 30.5 CHARGE CONTROLLER MAX

PHOTOVOLTAIC SYSTEM

♠ DC DISCONNECT ♠

OPERATING VOLTAGE

OPERATING CURRENT

MAX SYSTEM VOLTAGE

SHORT CIRCUIT CURRENT

CHARGE CONTROLLER MAX

LABEL 9 - INVERTER 1

AT PV DISCONNECTING MEANS. TO BE USED IF NEC 2014 APPLIES, NEC 690,53

LABEL 9 - INVERTER 2

AMPS

AMPS

VDC

0

AT PV DISCONNECTING MEANS. TO BE USED IF NEC 2014 APPLIES, NEC 690.53

DIRECT CURRENT **PHOTOVOLTAIC** POWER SOURCE

MAXIMUM VOLTAGE 480 VDC MAXIMUM CIRCUIT CURRENT

30.5 AMPS MAXIMUM RATED

DC TO DC CONVERTER OUTPUT XX AMPS

DIRECT CURRENT **PHOTOVOLTAIC POWER SOURCE**

MAXIMUM VOLTAGE 0 VDC MAXIMUM CIRCUIT CURRENT 0 AMPS

MAXIMUM RATED DC TO DC CONVERTER OUTPUT XX AMPS

LABEL 10 - INVERTER 1

AT PV DISCONNECTING MEANS. TO BE USED IF NEC 2017 APPLIES, NEC 690.53

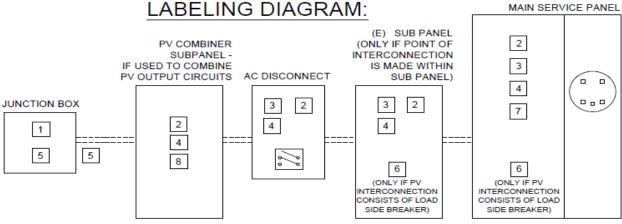
LABEL 10 - INVERTER 2 AT PV DISCONNECTING MEANS. TO BE USED IF NEC 2017 APPLIES. NEC 690.53

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUTDOWN PV SYSTEM AND REDUCE

LABEL 11

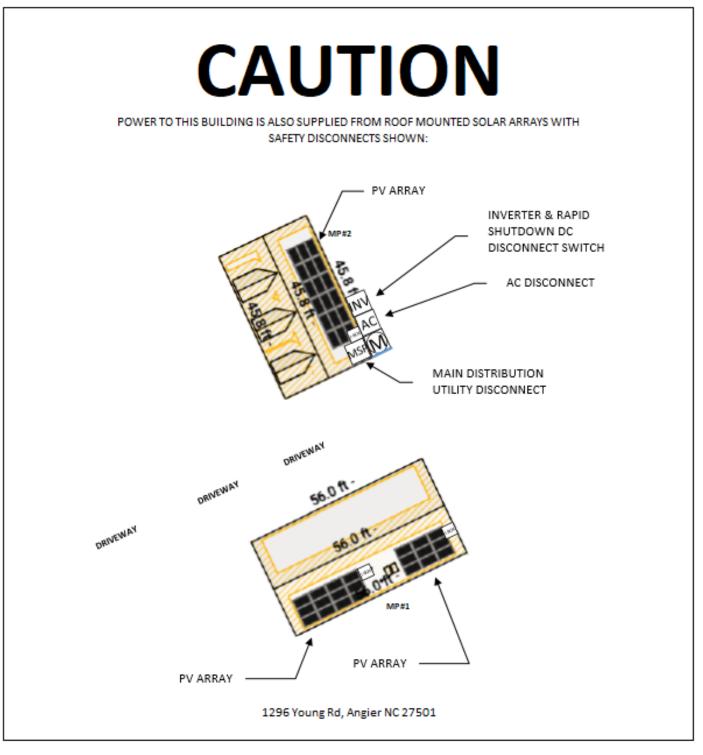
FOR PV SYSTEMS THAT SHUT DOWN THE ARRAY AND CONDUCTORS LEAVING THE ARRAY. CEC 690.56(C)(1)(a)

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. **

ADDRESS:			CONTRACTOR:		EQUIPME	EQUIPMENT:				REV	0		
Ruth Frame			GAF Energy LLC (NC)				14.04	KW (DC)	11.4	KW (AC)	PV5		
1296 Young Rd			973.628.3411	125 Mitchell Blvd, Sui	ite D		39	Solaria PowerXT 360R-PD	(1)	SolarEdge SE11400H-US (240V)	LABELS		
Angier	NC	27501	U.33879	San Rafael	CA	94903					BY: CBennett		



ADDRESS:			CONTRACTOR:			EQUIPME	NT:	DATE 9/16/2021	REV	0			
Ruth Frame			GAF Energy LLC (NC)				14.04	KW (DC)	11.4	KW (AC)	PV6		
1296 Young Rd			973.628.3411	125 Mitchell Blvd, Su	ite 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



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
 Optional: Revenue grade data, ANSI C12.20 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
- 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 MinNomMax. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac				
AC Output Voltage MinNomMax. (183 - 208 - 229)	-	✓	-	✓	-	-	✓	Vac				
AC Frequency (Nominal)							Hz					
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	А				
Maximum Continuous Output Current @208V		16	=:	24	100	51	48.5	А				
GFDI Threshold				1				А				
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	15	-	15500	W				
Transformer-less, Ungrounded		1		Yes								
Maximum Input Voltage		480										
Nominal DC Input Voltage		380 400										
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	14	=	27	Adc				
Max. Input Short Circuit Current				45				Adc				
Reverse-Polarity Protection				Yes								
Ground-Fault Isolation Detection				600kΩ Sensitivity								
Maximum Inverter Efficiency	99			9	9.2			%				
CEC Weighted Efficiency			Ç	99			99 @ 240V 98.5 @ 208V	%				
Nighttime Power Consumption				< 2.5				W				
ADDITIONAL FEATURES												
Supported Communication Interfaces			RS485, Etherne	t, ZigBee (optional), C	Cellular (optional)							
Revenue Grade Data, ANSI C12.20				Optional ⁽³⁾								
Rapid Shutdown - NEC 2014 and 2017 690.12			Automatic Rap	id Shutdown upon AC	Grid Disconnect							
STANDARD COMPLIANCE												
Safety		UL1741,	, UL1741 SA, UL1699B	CSA C22.2, Canadiar	n AFCI according to T.	I.L. M-07						
Grid Connection Standards			IEE	E1547, Rule 21, Rule 14	4 (HI)							
Emissions				FCC Part 15 Class B								
INSTALLATION SPECIFICATION	ONS											
AC Output Conduit Size / AWG Range		1'	" Maximum / 14-6 AW	/G		1" Maximur	n /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 /				°F / °C				
Protection Rating					NEMA 4X (Inverter with Safety Switch)							



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For other regional settings please contact SolarEdge support
 A higher current source may be used; the inverter will limit its input current to the values stated
 Revenue grade inverter P/N: SExxxH-US000NNC2
 For power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf
 -40 version P/N: SExxxH-US000NNU4

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

solaredge.com

- 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 modulelevel monitoring
- Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)
- Module-level voltage shutdown for installer and firefighter safety





/ 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)	2	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	2.5	17.5	Adc
Maximum Efficiency			99	9.5			%
Weighted Efficiency			98.8			98.6	%
Overvoltage Category				ii.			
OUTPUT DURING OPER	ATION (POWE	R OPTIMIZER C	ONNECTED TO	OPERATING SO	LAREDGE INVE	RTER)	
Maximum Output Current	·		1	5			Adc
Maximum Output Voltage		6	50		8	5	Vdc
Safety Output Voltage per	1 ± 0.1						
Power Optimizer	CF		1 ±	0.1			Vdc
STANDARD COMPLIAN	CE	-					Vdc
STANDARD COMPLIAN	CE	FC	CC Part15 Class B, IEC6	51000-6-2, IEC61000-6	3-3		Vdc
STANDARD COMPLIAN EMC Safety	CE	FC	CC Part15 Class B, IEC6 IEC62109-1 (class	51000-6-2, IEC61000-6 s II safety), UL1741	i-3		Vdc
STANDARD COMPLIAN EMC Safety Material	CE	FC	CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , I	51000-6-2, IEC61000-6 s II safety), UL1741 UV Resistant	i-3		Vdc
STANDARD COMPLIAN EMC Safety Material ROHS		FC	CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , I	51000-6-2, IEC61000-6 s II safety), UL1741	i-3		Vdc
STANDARD COMPLIAN EMC Safety Material ROHS INSTALLATION SPECIFIC		FC	CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , I	51000-6-2, IEC61000-6 s II safety), UL1741 UV Resistant	5-3		Vdc
STANDARD COMPLIAN EMC Safety Material ROHS INSTALLATION SPECIFIC Maximum Allowed System Voltage			CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , 1 Yı	51000-6-2, IEC61000-6 5 II safety), UL1741 UV Resistant es			Vdc
STANDARD COMPLIAN EMC Safety Material ROHS INSTALLATION SPECIFIC Maximum Allowed System			CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , Ye	51000-6-2, IEC61000-6 s II safety), UL1741 UV Resistant es 00	erters		
STANDARD COMPLIAN EMC Safety Material ROHS INSTALLATION SPECIFIC Maximum Allowed System Voltage	CATIONS		C Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , W W 10 DlarEdge Single Phase	51000-6-2, IEC61000-6 5 II safety), UL1741 UV Resistant es		129 x 162 x 59 / 5.1 x 6.4 x 2.3	Vdc mm / in
STANDARD COMPLIAN EMC Safety Material RoHS INSTALLATION SPECIFIC Maximum Allowed System Voltage Compatible inverters	CATIONS	All Sc	CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , I Yu 10 DlarEdge Single Phase x 1.1	51000-6-2, IEC61000-6 I I safety), UL1741 UV Resistant es 00 and Three Phase inv 129 x 153 x 33.5 / 5.1 x 6 x 1.3 750 / 1.7	erters 129 x 159 x 49.5 /		Vdc
STANDARD COMPLIAN EMC Safety Material RoHS INSTALLATION SPECIFIC Maximum Allowed System Voltage Compatible inverters Dimensions (W x L x H)	CATIONS	All Sc) x 153 x 27.5 / 5.1 x 6	CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , I You 10 DlarEdge Single Phase x 1.1	51000-6-2, IEC61000-6 Is I safety), UL1741 UV Resistant es 00 and Three Phase inv 129 x 153 x 33.5 / 5.1 x 6 x 1.3 750 / 1.7 dual MC4 ⁽³⁾	erters 129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	5.1 x 6.4 x 2.3	Vdc mm / in
STANDARD COMPLIAN EMC Safety Material RoHS INSTALLATION SPECIFIC Maximum Allowed System Voltage Compatible inverters Dimensions (W x L x H) Weight (including cables) Input Connector Input Wire Length	CATIONS	All Sc) x 153 x 27.5 / 5.1 x 6	CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , I No 10 DolarEdge Single Phase x 1.1 Single or o	51000-6-2, IEC61000-6 Il safety), UL1741 UV Resistant es 00 and Three Phase inv 129 x 153 x 33.5 / 5.1 x 6 x 1.3 750 / 1.7 dual MC4 ⁽³⁾ / 0.52	erters 129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	5.1 x 6.4 x 2.3	Vdc mm / in
STANDARD COMPLIAN EMC Safety Material RoHS INSTALLATION SPECIFIC Maximum Allowed System Voltage Compatible inverters Dimensions (W x L x H) Weight (including cables) Input Connector	CATIONS	All Sc) x 153 x 27.5 / 5.1 x 6	CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , I No 10 DolarEdge Single Phase x 1.1 Single or o	51000-6-2, IEC61000-6 Is I safety), UL1741 UV Resistant es 00 and Three Phase inv 129 x 153 x 33.5 / 5.1 x 6 x 1.3 750 / 1.7 dual MC4 ⁽³⁾	erters 129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	5.1 x 6.4 x 2.3	Vdc mm/ir gr/lb
STANDARD COMPLIAN EMC Safety Material RoHS INSTALLATION SPECIFIC Maximum Allowed System Voltage Compatible inverters Dimensions (W x L x H) Weight (including cables) Input Connector Input Wire Length Output Wire Type / Connector Output Wire Length	CATIONS 129	All Sc) x 153 x 27.5 / 5.1 x 6	CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , 10 plarEdge Single Phase x 1.1 Single or c 0.16 , Double Insu	51000-6-2, IEC61000-6 5 II safety), UL1741 UV Resistant es 00 2 and Three Phase inv 129 x 153 x 33.5 / 5.1 x 6 x 1.3 750 / 1.7 dual MC4 ⁽³⁾ / 0.52 llated / MC4 1.2	erters 129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	5.1 x 6.4 x 2.3	Vdc mm/ir gr/lb m/ft m/ft
STANDARD COMPLIAN EMC Safety Material RoHS INSTALLATION SPECIFIC Maximum Allowed System Voltage Compatible inverters Dimensions (W x L x H) Weight (including cables) Input Connector Input Wire Length Output Wire Type / Connector Output Wire Length Operating Temperature Range	CATIONS 129	All Sc 0 x 153 x 27.5 / 5.1 x 6 630 / 1.4	CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , No DolarEdge Single Phase x 1.1 Single or c 0.16 , Double Insu -40 - +85 /	51000-6-2, IEC61000-6 5 II safety), UL1741 UV Resistant es 00 2 and Three Phase inv 129 x 153 x 33.5 / 5.1 x 6 x 1.3 750 / 1.7 dual MC4 ⁽³⁾ / 0.52 llated / MC4 1.2 / (-40 - +185	erters 129 x 159 x 49.5 / 5.1 x 6.3 x 1.9 845 / 1.9	5.1 x 6.4 x 2.3	Vdc mm/ir gr/lb m/ft
STANDARD COMPLIAN EMC Safety Material RoHS INSTALLATION SPECIFIC Maximum Allowed System Voltage Compatible inverters Dimensions (W x L x H) Weight (including cables) Input Connector Input Wire Length Output Wire Type / Connector Output Wire Length	CATIONS 129	All Sc 0 x 153 x 27.5 / 5.1 x 6 630 / 1.4	CC Part15 Class B, IEC6 IEC62109-1 (class UL94 V-0 , No DolarEdge Single Phase x 1.1 Single or c 0.16 , Double Insu -40 - +85 /	51000-6-2, IEC61000-6 5 II safety), UL1741 UV Resistant es 00 2 and Three Phase inv 129 x 153 x 33.5 / 5.1 x 6 x 1.3 750 / 1.7 dual MC4 ⁽³⁾ / 0.52 llated / MC4 1.2	erters 129 x 159 x 49.5 / 5.1 x 6.3 x 1.9 845 / 1.9	5.1 x 6.4 x 2.3	Vdc mm/ir gr/lb m/ft m/ft

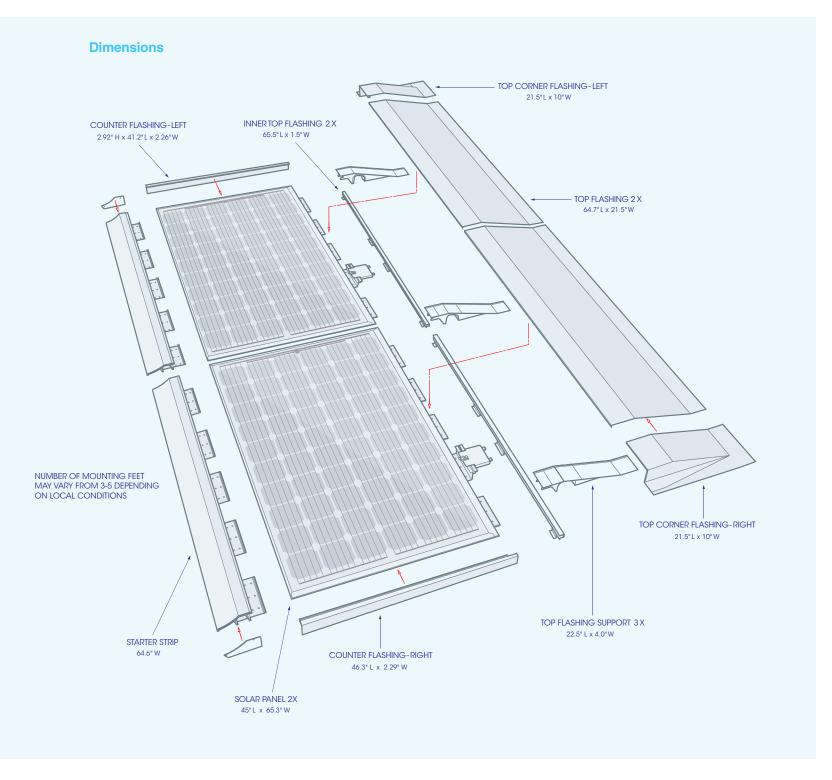
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Rated power of the module at STC will not exceed the optim
 NEC 2017 requires max input voltage be not more than 80V
 For other connector types please contact SolarEdge

Single phase Three Phase 208V Three Phase 480V (Power Optimizers) 13 (12 with SE3K) Maximum String Length 50(6) 6000(7) Maximum Power per String SE7600-US - SE11400-5250 12750(8) Parallel Strings of Different Lengths or Orientations

[|] For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string_sizing_na.pdf
| It is not allowed to mix P405/P505 with P320/P340/P370/P400 in one string
| A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement
| 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
| 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)
| 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)
| 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)
| For SE30KUS/SE33.KUS/SE66.6KUS/SE30KUS/







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	CAE Color Energy Cystom
wiodei 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

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.



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
rame	Black Powder Coated Aluminum
Weight	40.0 lb. (22.2 kg)
Operating Femperatures	-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



*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

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