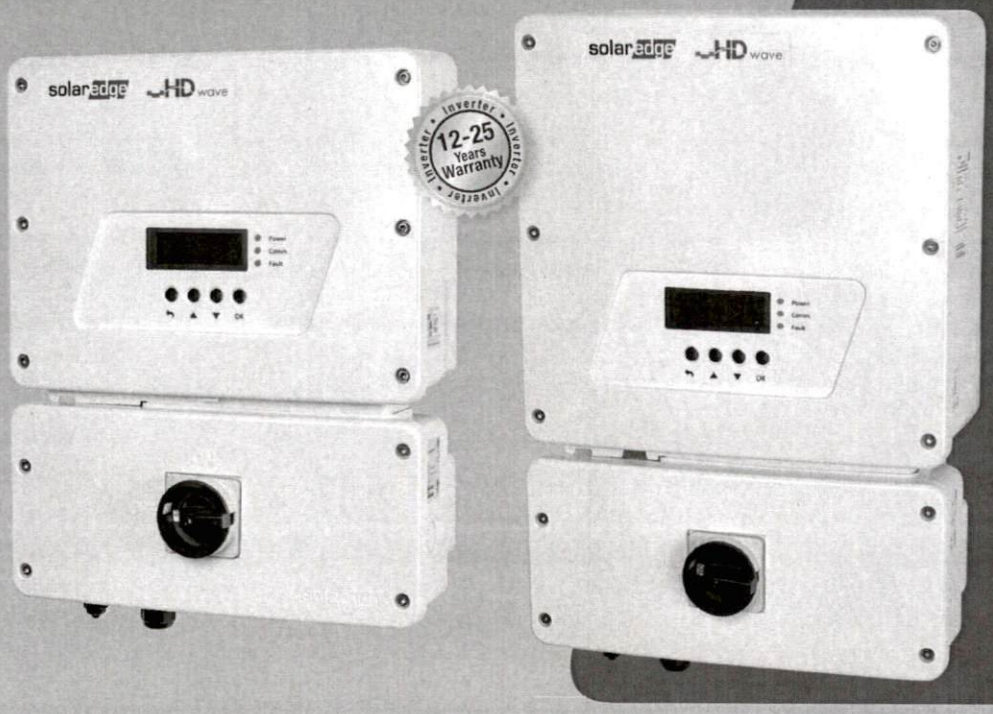
solaredge

Single Phase Inverters

for North America

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

INVERTERS



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
- High reliability without any electrolytic capacitors
- Built-in module-level monitoring
- Outdoor and indoor installation
- Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)

HD wave

Single Phase Inverters for North America

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

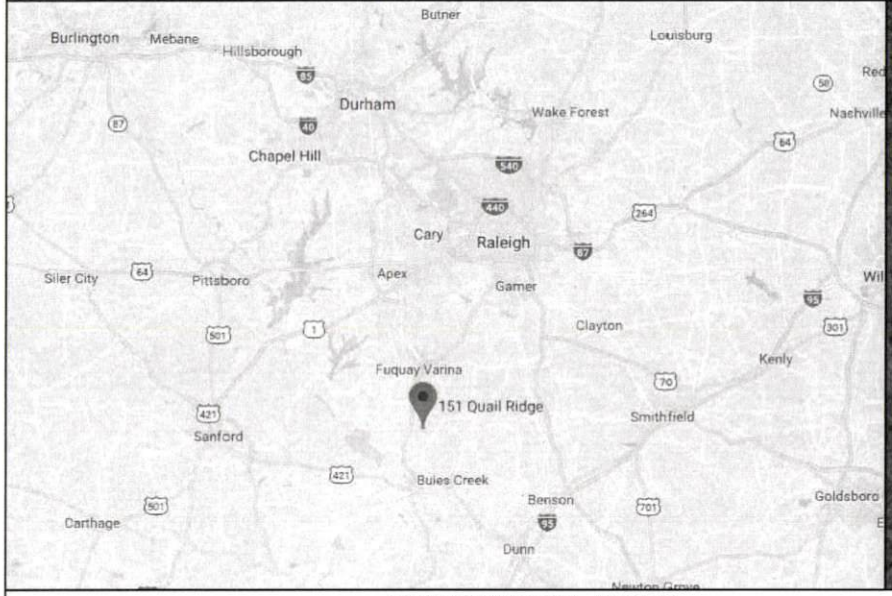
	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	
OUTPUT							
Rated AC Power Output	3000	3800	5000	6000	7600	10000	VA
Max. AC Power Output	3000	3800	5000	6000	7600	10000	VA
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5[1]						Hz
Maximum Continuous Output Current@240V	12.5	16	21	25	32	42	A
GFDI Threshold	1						A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes						
INPUT							
Maximum DC Power	4650	5900	7750	9300	11800	15500	W
Transformer-less, Ungrounded	Yes						
Maximum Input Voltage	480						Vdc
Nominal DC Input Voltage	380				400		Vdc
Maximum Input Current@240V	8.5	10.5	13.5	16.5	20	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						%
Nighttime Power Consumption	< 2.5						W
ADDITIONAL FEATURES							
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)						
Revenue Grade Data, ANSI C12.20	Optional[2]						
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	3/4" minimum / 20-4 AWG						
DC Input Conduit Size / # of Strings / AWG Range	3/4" minimum / 1-2 strings / 14-6 AWG					3/4" minimum / 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				Natural convection		
Operating Temperature Range	-13 to +140 / -25 to +60[3] (-40°F / -40°C option)[4]						°F / °C
Protection Rating	NEMA 3R (Inverter with Safety Switch)						

[1] For other regional settings please contact SolarEdge support
[2] Revenue grade inverter P/N: SExxxxH-US000NNC2
[3] For power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf
[4] -40 version P/N: SExxxxH-US000NNU4

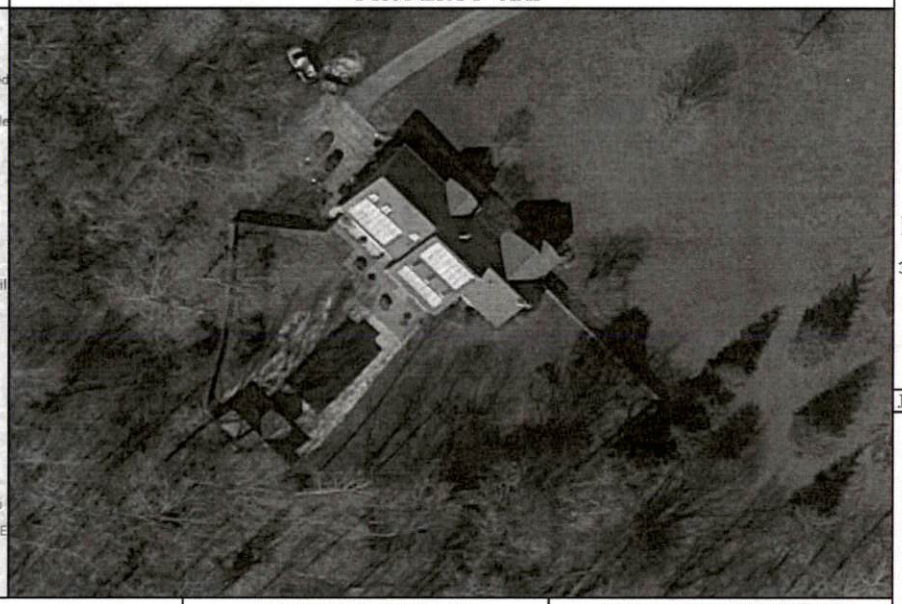
RoHS

© SolarEdge Technologies, Inc. All rights reserved. SOLAREDGE, the SolarEdge logo, OPTIMIZED BY SOLAREDGE are trademarks or registered trademarks of SolarEdge Technologies, Inc. All other trademarks mentioned herein are trademarks of their respective owners. Date: 03/2018/V01/ENG NAM. Subject to change without notice.

VICINITY MAP



PROPERTY MAP



CONSTRUCTION NOTES

1. ALL WORK AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST NATIONAL, STATE, AND LOCAL CODES AND ORDINANCES
2. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS, BEST PRACTICES, AND SPECIFICATIONS
3. WIRES SHALL BE RATED AND LABELED "SUNLIGHT RESISTANT" WHERE EXPOSED TO AMBIENT CONDITIONS
4. THE PHOTOVOLTAIC SYSTEM SHALL NOT EXCEED 600 VOLTS OR 800 AMPS
5. EACH ELECTRICAL APPLIANCE SHALL BE PROVIDED WITH A NAMEPLATE GIVING THE IDENTIFYING NAME AND THE RATING IN VOLTS AND AMPERES, OR VOLTS AND WATTS. IF THE APPLIANCE IS TO BE USED ON A SPECIFIC FREQUENCY OR FREQUENCIES, IT SHALL BE SO MARKED. WHERE MOTOR OVERLOAD PROTECTION EXTERNAL TO THE APPLIANCES IS REQUIRED, THE APPLIANCE SHALL BE SO MARKED
6. WHERE APPLICABLE, GROUNDING ELECTRODE CONDUCTOR TO BE CONTINUOUS. GROUNDING CRIMPS TO BE IRREVERSIBLE
7. GROUNDED DC PHOTOVOLTAIC ARRAYS SHALL BE PROVIDED WITH DC GROUND-FAULT PROTECTION THAT MEETS THE REQUIREMENTS OF NEC SECTION 690.5. UNGROUNDED DC PHOTOVOLTAIC ARRAYS SHALL COMPLY WITH NEC SECTION 690.35
8. IN ONE- AND TWO-FAMILY DWELLINGS, LIVE PARTS IN PHOTOVOLTAIC SOURCE CIRCUITS AND PHOTOVOLTAIC OUTPUT CIRCUITS OVER 150 VOLTS TO GROUND, SHALL ONLY BE ACCESSIBLE TO QUALIFIED PERSONS WHILE ENERGIZED.
9. PHOTOVOLTAIC SYSTEMS SHALL BE PERMANENTLY MARKED AT VARIOUS EQUIPMENT LOCATIONS TO IDENTIFY THAT A PHOTOVOLTAIC SYSTEM IS INSTALLED AND THAT VARIOUS DANGERS ARE PRESENT.
10. EACH PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS A PHOTOVOLTAIC SYSTEM DISCONNECT
11. WHERE ALL TERMINALS OF A DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION, A WARNING SIGN SHALL BE MOUNTED ON OR ADJACENT TO THE DISCONNECT
12. A PERMANENT LABEL FOR THE DIRECT-CURRENT PHOTOVOLTAIC POWER SOURCE SHALL BE PROVIDED BY THE INSTALLED AT THE DC DISCONNECT MEANS
13. A PERMANENT PLAQUE OR DIRECTORY, DENOTING ALL ELECTRIC POWER SOURCES SERVING THE PREMISES, SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION AND AT LOCATIONS OF ALL POWER PRODUCTION SOURCES.
14. A PERMANENT PLAQUE OR DIRECTORY SHALL BE PROVIDED DENOTING THE LOCATIONS OF THE SERVICE DISCONNECT MEANS AND THE PHOTOVOLTAIC SYSTEM DISCONNECT MEANS IF THEY ARE NOT LOCATED AT THE SAME LOCATION.
15. ALL MODULE GROUND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH NEC SECTION 690.4 (C)

ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
DC	DIRECT CURRENT
EGC	EQUIPMENT GROUNDING CONDUCTOR
EMT	ELECTRICAL METAL TUBING
GALV	GALVANIZED
GEC	GROUNDING ELECTRODE CONDUCTOR
GND	GROUND
I	CURRENT
IMP	CURRENT AT MAXIMUM POWER
ISC	SHORT-CIRCUIT CURRENT
KVA	KILOVOLT AMPERE
KW	KILOWATT
MAX	MAXIMUM
MIN	MINIMUM
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
NOM	NOMINAL
NTS	NOT TO SCALE
PNOM	NOMINAL POWER
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE
SN	SOLAR NOON
STC	STANDARD TEST CONDITIONS
TYP	TYPICAL
V	VOLT
VMP	VOLTAGE AT MAXIMUM POWER
VOC	OPEN-CIRCUIT VOLTAGE
W	WATT

CODE REFERENCES

2017 NATIONAL ELECTRIC CODE
2012 NORTH CAROLINA BUILDING CODE
2012 NORTH CAROLINA RESIDENTIAL CODE
2012 NORTH CAROLINA FIRE CODE

SHEET INDEX

SITE CONDITIONS

ASCE 7-10 WIND SPEED - 115 MPH
EXPOSURE CATEGORY - B
RISK CATEGORY - II

LEGEND

DISCONNECT SWITCH
FUSE
CIRCUIT BREAKER
GND EQUIP. GROUND

ENGINEER:

NORTH CAROLINA PROFESSIONAL SEAL 035699 ENGINEER ANDREW W. KING

MODEL ENERGY
300 FAYETTEVILLE ST.
#1430
RALEIGH, NC 27602
919-274-9905
MODELENERGY.COM
P-1194

JOB TITLE:

NEW SOLAR PV SYSTEM
17.5 kW DC INPUT
15.2 kW AC EXPORT

Tim Gage
151 Quail Ridge
Angier, NC 27501

CLIENT:

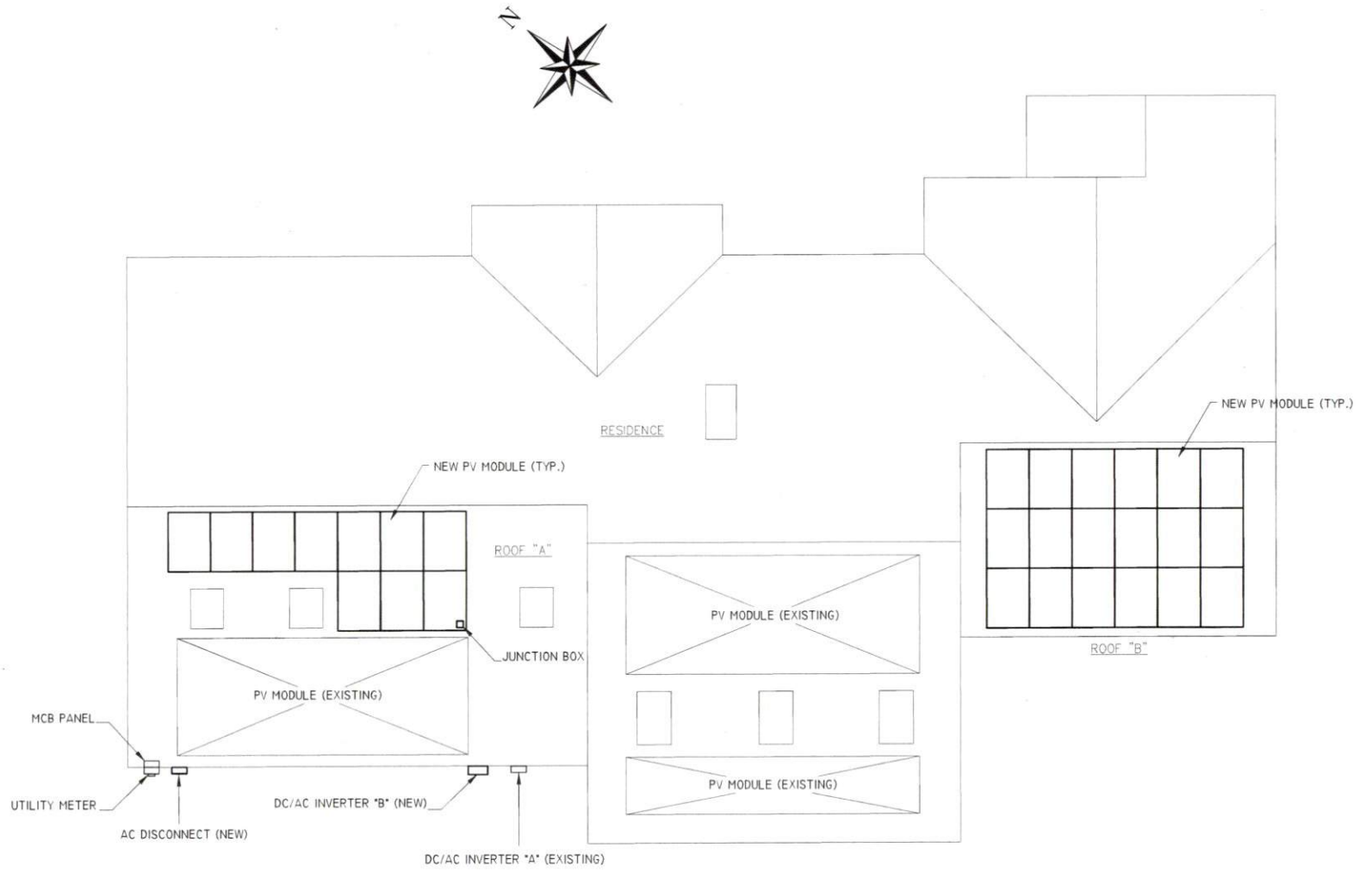
NC SOLAR NOW

ISSUED FOR:	DATE:
CONSTRUCTION	10/30/18

PROJECT INFORMATION

PV1.1

© 2018 MODEL ENERGY, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MODEL ENERGY, PLLC.



1 SITE & STRUCTURAL PLAN

SCALE : 1/8" = 1'-0"

ENGINEER:

NORTH CAROLINA PROFESSIONAL SEAL 035699 ENGINEER ANDREW W. KING 11/1/18

MODEL ENERGY
300 FAYETTEVILLE ST.
#1430
RALEIGH, NC 27602
919-274-9905
MODELENERGY.COM
P-1194

JOB TITLE:

NEW SOLAR PV SYSTEM
17.5 kW DC INPUT
15.2 kW AC EXPORT

Tim Gage
151 Quail Ridge
Angier, NC 27501

CLIENT:

NC SOLAR NOW

ISSUED FOR:	DATE:
CONSTRUCTION	10/30/18

SITE & STRUCTURAL INFORMATION

PV2.1

©2018 MODEL ENERGY, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MODEL ENERGY, PLLC.

ROOF MOUNT & FASTENER	
ROOF MOUNT:	
MAKE	SOLAR ROOF HOOK
MODEL	L-FOOT
MATERIAL	ALUMINUM
FASTENER	
MAKE	SOLAR ROOF HOOK
MODEL	QUICKBOLT
MATERIAL	304 SS
SIZE	5/16-18 X 7"
GENERAL	
WEIGHT	1 LBS
FASTENERS PER MOUNT	1
MAX. PULL-OUT FORCE	960 LBS. / MOUNT
SAFETY FACTOR	2.0
DESIGN PULL-OUT FORCE	480 LBS. / MOUNT

MOUNTING RAILS	
MAKE	UNIRAC
MODEL	SM STANDARD
MATERIAL	ALUMINUM
WEIGHT	1.25 LBS./FT.
SPACING	34 IN.

PV MODULES	
MAKE	CAN. SOLAR
MODEL	CS6K-300MS
WIDTH	39 IN.
LENGTH	65 IN.
THICKNESS	1.6 IN.
WEIGHT	40 LBS.

ROOFS "A" & "B" ZONES:

ALL ZONES	MAX. OVERHANG = 16"
ZONE 1	MAX. FASTENER SPAN ZONE 1 = 72"
ZONE 2	MAX. FASTENER SPAN ZONE 2 = 48"
ZONE 3	MAX. FASTENER SPAN ZONE 3 = 24"

ROOF "A" SUMMARY	
STRUCTURE:	
TYPE	TRUSSES
MATERIAL	SOUTHERN PINE #2
SIZE	2" X 4"
SPACING	24" O.C.
EFF. SPAN	12'-7"
PITCH	7 / 12
DENSITY	30 LBS./CU.FT.
DECKING:	
TYPE	OSB
MATERIAL	WOOD COMPOSITE
THICKNESS	7/16"
WEIGHT	1.6 LBS./SQFT.
ROOFING:	
TYPE	ARCH SHINGLE
MATERIAL	ASPHALT
WEIGHT	2.3 LBS./SQFT.

ROOF "A" ARRAY SUMMARY	
# MODULES	10
MOD. ATT. MID	16
MOD. ATT. END	8
ROOF MOUNTS	18
RAIL LENGTH	70 FT.
ARRAY AREA	177 SQFT.
ARRAY WEIGHT	496 LBS.
AZIMUTH @ SN	225°
TILT ANGLE	32°

ROOF "A" LOADING	
DEAD LOAD:	
ROOFING	3.9 LBS./SQFT.
PV ARRAY	2.8 LBS./SQFT.
TOTAL	6.7 LBS./SQFT.
WIND LOAD:	
UPLIFT ZONE 1	-24.6 LBS./SQFT.
UPLIFT ZONE 2	-29.0 LBS./SQFT.
UPLIFT ZONE 3	-29.0 LBS./SQFT.
DOWNWARD	23.0 LBS./SQFT.
FASTENER LOAD:	
UPLIFT ZONE 1	-400 LBS.
UPLIFT ZONE 2	-314 LBS.
UPLIFT ZONE 3	-157 LBS.
DOWNWARD	226 LBS.

ROOF "B" SUMMARY	
STRUCTURE:	
TYPE	TRUSSES
MATERIAL	SOUTHERN PINE #2
SIZE	2" X 4"
SPACING	24" O.C.
EFF. SPAN	15'-0"
PITCH	7 / 12
DENSITY	30 LBS./CU.FT.
DECKING:	
TYPE	OSB
MATERIAL	WOOD COMPOSITE
THICKNESS	7/16"
WEIGHT	1.6 LBS./SQFT.
ROOFING:	
TYPE	ARCH SHINGLE
MATERIAL	ASPHALT
WEIGHT	2.3 LBS./SQFT.

ROOF "B" ARRAY SUMMARY	
# MODULES	18
MOD. ATT. MID	30
MOD. ATT. END	12
ROOF MOUNTS	28
RAIL LENGTH	125 FT.
ARRAY AREA	318 SQFT.
ARRAY WEIGHT	890 LBS.
AZIMUTH @ SN	225°
TILT ANGLE	32°

ROOF "B" LOADING	
DEAD LOAD:	
ROOFING	3.9 LBS./SQFT.
PV ARRAY	2.8 LBS./SQFT.
TOTAL	6.7 LBS./SQFT.
WIND LOAD:	
UPLIFT ZONE 1	-24.6 LBS./SQFT.
UPLIFT ZONE 2	-29.0 LBS./SQFT.
UPLIFT ZONE 3	-29.0 LBS./SQFT.
DOWNWARD	23.0 LBS./SQFT.
FASTENER LOAD:	
UPLIFT ZONE 1	-400 LBS.
UPLIFT ZONE 2	-314 LBS.
UPLIFT ZONE 3	-157 LBS.
DOWNWARD	261 LBS.

STATEMENT OF STRUCTURAL COMPLIANCE

THE EXISTING ROOF STRUCTURE HAS BEEN DESIGNED TO SUPPORT THE ADDITIONAL LOADS OF THE PURPOSED PV SYSTEM. IN ADDITION, THE RACKING AND FASTENING SYSTEM SHALL BE CAPABLE OF SECURING THE SYSTEM TO THE STRUCTURE UNDER DESIGN CONDITIONS WHEN INSTALLED PROPERLY AND IN ACCORDANCE WITH THE RACKING AND FASTENING ARRANGEMENT DETAILED WITHIN THESE DRAWINGS.

SIGNED: _____

NAME: ANDREW W. KING, PE

TITLE: PROFESSIONAL ENGINEER

ENGINEER:

NORTH CAROLINA PROFESSIONAL SEAL 035699 ENGINEER ANDREW W. KING 11/1/18

MODEL ENERGY
300 FAYETTEVILLE ST.
#1430
RALEIGH, NC 27602
919-274-9905
MODELENERGY.COM
P-1194

JOB TITLE:

NEW SOLAR PV SYSTEM
17.5 kW DC INPUT
15.2 kW AC EXPORT

Tim Gage
151 Quail Ridge
Angier, NC 27501

CLIENT:

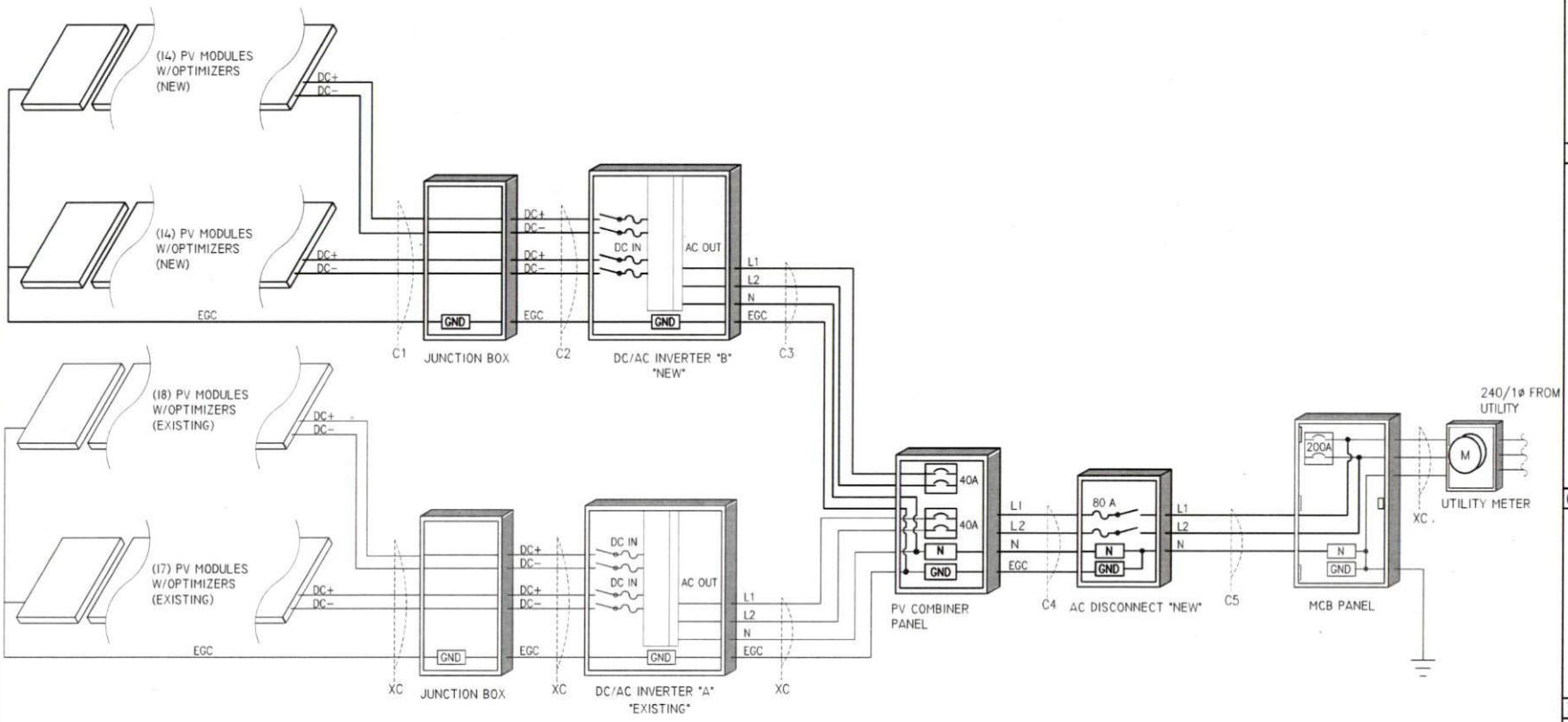
NC SOLAR NOW

ISSUED FOR:	DATE:
CONSTRUCTION	10/30/18

STRUCTURAL INFORMATION

PV2.2

© 2018 MODEL ENERGY, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MODEL ENERGY, PLLC.



1 PV SYSTEM ELECTRICAL WIRING SCHEMATIC

SCALE : NTS

ENGINEER:

NORTH CAROLINA PROFESSIONAL SEAL 035699 ENGINEER ANDREW W. KING

MODEL ENERGY
300 FAYETTEVILLE ST.
#1430
RALEIGH, NC 27602
919-274-9905
MODELENERGY.COM
P-1194

JOB TITLE:

NEW SOLAR PV SYSTEM
17.5 kW DC INPUT
15.2 kW AC EXPORT

Tim Gage
151 Quail Ridge
Angier, NC 27501

CLIENT:

NC SOLAR NOW

ISSUED FOR:	DATE:
CONSTRUCTION	10/30/18

ELECTRICAL INFORMATION

PV3.1

© 2018 MODEL ENERGY, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MODEL ENERGY, PLLC.

PV MODULES "EXISTING"	
MAKE	CAN. SOLAR
MODEL	CS6P-260
TECHNOLOGY	POLY-CRYST.
NOM. POWER (Pnom)	260 WATTS
NOM. VOLT. (Vmp)	30.4 VOLTS
O.C. VOLT. (Voc)	37.5 VOLTS
MAX. SYS. VOLT.	1000 V (UL)
TEMP. COEF. (Vtc)	-0.31 %/°C
NOM. CURR. (Imp)	8.56 AMPS
S.C. CURR. (Isc)	9.12 AMPS
MAX. SERIES FUSE	15 AMPS

PV MODULES "NEW"	
MAKE	CAN. SOLAR
MODEL	CS6K-300MS
TECHNOLOGY	MONO-CRYST.
NOM. POWER (Pnom)	300 WATTS
NOM. VOLT. (Vmp)	32.5 VOLTS
O.C. VOLT. (Voc)	39.7 VOLTS
MAX. SYS. VOLT.	1000 V (UL)
TEMP. COEF. (Vtc)	-0.30 %/°C
NOM. CURR. (Imp)	9.24 AMPS
S.C. CURR. (Isc)	9.83 AMPS
MAX. SERIES FUSE	15 AMPS

MODULE OPTIMIZER "NEW"	
MAKE	SOLAREDGE
MODEL	P320
DC INPUT:	
NOM. POWER	320 WATTS
VOLT. RANGE	8-48
MAX. CURR.	11.0 AMPS
DC OUTPUT:	
NOM. POWER	320 WATTS
MAX. VOLT.	60 VOLTS
MAX. CURR.	15 AMPS
MIN. STRING	8 OPTIMIZERS
MAX. STRING	25 OPTIMIZERS
MAX. POWER	5700 WATTS

MODULE OPTIMIZER "EXISTING"	
MAKE	SOLAREDGE
MODEL	P300
DC INPUT:	
NOM. POWER	300 WATTS
VOLT. RANGE	8-48
MAX. CURR.	10.0 AMPS
DC OUTPUT:	
NOM. POWER	300 WATTS
MAX. VOLT.	60 VOLTS
MAX. CURR.	15 AMPS
MIN. STRING	8 OPTIMIZERS
MAX. STRING	25 OPTIMIZERS
MAX. POWER	5250 WATTS

JUNCTION BOX	
MAKE	SOLADECK
MODEL	0783-3R
PRO. RATING	NEMA 3R
VOLT. RATING	600 VOLTS
AMP RATING	120 AMPS
UL LISTING	UL 50

PV COMBINER PANEL (NEW)	
MAKE	GENERIC
MODEL	N/A
ENCL. RATING	NEMA 3R
VOLT. RATING	600 VOLTS
BUS RATING	125 AMPS
UL LIST. (Y/N)	YES
MAIN BREAKER (Y/N)	NO
BREAKER RATING	N/A

CONDUCTOR SCHEDULE

TAG	CURRENT CARRYING CONDUCTORS				GROUNDING CONDUCTORS				CONDUIT/RACEWAY				NOTES
	QTY.	SIZE	MATERIAL	INSULATION	QTY.	SIZE	MATERIAL	INSULATION	QTY.	SIZE	MATERIAL	LOCATION	
C1	4	10 AWG	COPPER	PV WIRE	1	6 AWG	COPPER	BARE	-	-	-	FREE AIR	1
C2	4	10 AWG	COPPER	THWN-2	1	10 AWG	COPPER	THWN-2	1	1/2"	EMT	EXT	2,4
C3	3	8 AWG	COPPER	THWN	1	10 AWG	COPPER	THWN	1	3/4"	EMT	EXT	2,4
C4	3	4 AWG	COPPER	THWN	1	8 AWG	COPPER	THWN	1	1"	EMT	EXT	2,4
C5	3	3 AWG	COPPER	THWN	-	-	-	-	1	1"	EMT	EXT	2,4
XC	-	-	-	-	-	-	-	-	-	-	-	-	3

NOTES:

1. MANUFACTURER PROVIDED, UL LISTED WIRING HARNESS FOR USE ON EXPOSED ROOFS
2. CONDUIT SIZE SHOWN IS CODE MINIMUM. LARGER SIZES ARE ALLOWED.
3. EXISTING CONDUCTORS, FIELD VERIFY
4. EQUIPMENT TERMINAL RATING SHALL BE A MINIMUM OF 75°C AT BOTH END OF CONDUCTOR

DC/AC INVERTER "A" (EXIST.)	
MAKE	SOLAREDGE
MODEL	SE7600A-US
TECHNOLOGY	TRANSFORMER-LESS
DC INPUT:	
MAX. POWER	10250 WATTS
VOLT. RANGE	350-500 VOLTS
NOM. VOLT.	350 VOLTS
MAX. CURRENT	23 AMPS
STRINGS INPUTS	2 STRINGS
AC OUTPUT:	
NOM. POWER	7600 WATTS
NOM. VOLT.	240 VOLTS
MAX. POWER	8350 WATTS
MAX. CURR.	32 AMPS
GFP (Y/N)	YES
GFCI (Y/N)	YES
AFCI (Y/N)	YES
DC DISC. (Y/N)	YES
RAPID SHUTDOWN	YES
FUSE RATING	15 AMPS
PROTECT. RATING	NEMA 3R

DC/AC INVERTER "B" (NEW)	
MAKE	SOLAREDGE
MODEL	SE7600H-US
TECHNOLOGY	TRANSFORMER-LESS
DC INPUT:	
MAX. POWER	11800 WATTS
VOLT. RANGE	380-480 VOLTS
NOM. VOLT.	350 VOLTS
MAX. CURRENT	20 AMPS
STRING INPUTS	2 STRINGS
AC OUTPUT:	
NOM. POWER	7600 WATTS
NOM. VOLT.	240 VOLTS
MAX. POWER.	7600 WATTS
MAX. CURR.	32 AMPS
GFP (Y/N)	YES
GFCI (Y/N)	YES
AFCI (Y/N)	YES
DC DISC. (Y/N)	YES
RAPID SHUTDOWN	YES
FUSE RATING	15 AMPS
PROTECT. RATING	NEMA 3R

AC DISCONNECT (NEW)	
MAKE	GENERIC
MODEL	N/A
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
AMP RATING	100 AMPS
UL LIST. (Y/N)	YES
FUSED (Y/N)	YES
FUSE RATING	80 AMPS

NOTES:

- LOAD-BREAK RATED
- VISIBLE OPEN
- LOCKABLE IN OPEN POSITION
- INSTALL ADJACENT TO METER
- SERVICE RATED
- DISCONNECT TO BE READILY ACCESSIBLE TO UTILITY COMPANY PERSONNEL AT ALL TIMES
- PROVIDE NEUTRAL/GROUND BONDING JUMPER
- PROVIDE PLAQUE SHOWING SERVICE DISCONNECT LOCATIONS

MCB PANEL/SERVICE DISCONNECT (EXISTING)	
MAKE	SQUARE D
MODEL	QOC20UI00
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
BUS RATING	200 AMPS
UL LIST. (Y/N)	YES
MAIN BREAKER (Y/N)	YES
BREAKER RATING	200 AMPS

NOTES:

- BACK-FEED SOLAR OUTPUT VIA SUPPLY SIDE TAP INSIDE OF MCB PANEL.

ENGINEER:

NORTH CAROLINA PROFESSIONAL SEAL 035699 ENGINEER ANDREW W. KING

MODEL ENERGY
300 FAYETTEVILLE ST.
#1430
RALEIGH, NC 27602
919-274-9905
MODELENERGY.COM
P-1194

JOB TITLE:

NEW SOLAR PV SYSTEM
17.5 kW DC INPUT
15.2 kW AC EXPORT

Tim Gage
151 Quail Ridge
Angier, NC 27501

CLIENT:

NC SOLAR NOW

ISSUED FOR:	DATE:
CONSTRUCTION	10/30/18

ELECTRICAL INFORMATIONS

PV3.2

© 2018 MODEL ENERGY, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MODEL ENERGY, PLLC.

PHOTOVOLTAIC ARRAY AC DISCONNECT
MAXIMUM OPERATING AC VOLTAGE: 240V
MAXIMUM OPERATING CURRENT: 64 AMPS

PLACE ON COVER OF AC DISCONNECT SWITCH

WARNING!
ELECTRIC SHOCK HAZARD!
DO NOT TOUCH TERMINALS!
TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.

PLACE ON JUNCTION BOX

WARNING!
PHOTOVOLTAIC POWER SOURCE

PLACE ON DC CONDUIT

PHOTOVOLTAIC POWER SOURCE
PV COMBINER PANEL. DO NOT ADD ADDITIONAL LOADS.

PLACE ON PV COMBINER PANEL

WARNING!
ELECTRIC SHOCK HAZARD!
DO NOT TOUCH TERMINALS!
DUAL POWER SOURCE. PHOTOVOLTAIC SYSTEM IS SECONDARD POWER SOURCE.
TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.

PLACE ON MCB PANEL

WARNING!
INVERTER OUTPUT CONNECTION:
DO NOT RELOCATE THIS OVER-CURRENT DEVICE

LABEL FOR PV INPUT BREAKER

PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

RAPID SHUTDOWN LABEL

WARNING!
ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED.

PLACE ON JUNCTION BOXES, COMBINER BOXES, DISCONNECTS AND EQUIPMENT THAT ARE CONNECTED TO UNGROUNDED CIRCUITS.

WARNING!
ELECTRIC SHOCK HAZARD!
DO NOT TOUCH TERMINALS!
TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED.

PHOTOVOLTAIC POWER SOURCE
OPERATING AC VOLTAGE: 240V
MAX OPERATING AC OUTPUT CURRENT: 32 AMPS

PHOTOVOLTAIC ARRAY DC DISCONNECT
OPERATING DC VOLTAGE: 380 VOLTS
OPERATING CURRENT: 22.1 AMPS
MAX SYSTEM VOLTAGE: 480 VOLTS
SHORT-CIRCUIT CURRENT: 30 AMPS

PLACE ON THE COVER OF INVERTER "B"/DC DISCONNECT SWITCH

EQUIPMENT LABEL NOTES

1. LABELS SHALL HAVE A RED BACKGROUND COLOR WITH WHITE LETTERING. TEXT SHALL BE IN ALL CAPITAL LETTERS AND NOT BE BOLD FONT
2. LABEL MATERIAL SHALL BE SUITABLE FOR THE EQUIPMENT ENVIRONMENT
3. CONDUIT SHALL BE MARKED WITH REQUIRED LABEL EVERY 10 FEET

1 PV SYSTEM EQUIPMENT LABELS

SCALE : NTS

ENGINEER:
NORTH CAROLINA PROFESSIONAL SEAL 035699 ENGINEER ANDREW W. KING
MODEL ENERGY
300 FAYETTEVILLE ST.
#1430
RALEIGH, NC 27602
919-274-9905
MODELENERGY.COM
P-1194

JOB TITLE:

NEW SOLAR PV SYSTEM
17.5 kW DC INPUT
15.2 kW AC EXPORT

Tim Gage
151 Quail Ridge
Angier, NC 27501

CLIENT:

NC SOLAR NOW

ISSUED FOR:	DATE:
CONSTRUCTION	10/30/18

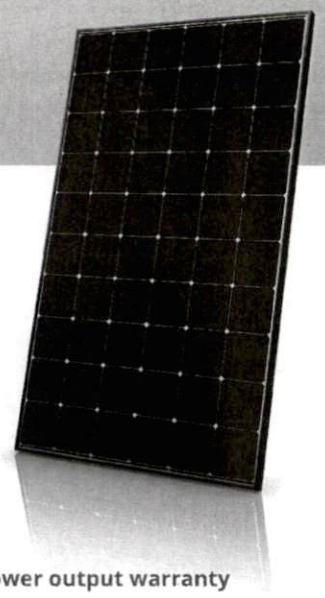
EQUIPMENT LABELS

PV4.1

© 2018 MODEL ENERGY, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MODEL ENERGY, PLLC.

NEW

CanadianSolar



SUPERPOWER
CS6K-290|295|300MS

Canadian Solar's new SuperPower modules with Mono-PERC cells significantly improve efficiency and reliability. The innovative technology offers superior low irradiance performance in the morning, in the evening and on cloudy days, increasing the energy output of the module and the overall yield of the solar system.

KEY FEATURES

- 11 % more power than conventional modules
- Excellent performance at low irradiance: 97.5 %
- High PTC rating of up to 91.87 %
- Improved energy production due to low temperature coefficients
- IP67 junction box for long-term weather endurance
- Heavy snow load up to 5400 Pa, wind load up to 2400 Pa

25 years linear power output warranty

10 years product warranty on materials and workmanship

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2008 / Quality management system
ISO 14001:2004 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / CE / MCS / CEC AU
UL 1703 / IEC 61215 performance: CEC listed (US)
UL 1703: CSA / IEC 61701 ED2: VDE / IEC 62716: VDE / Take-e-way
UNI 9177 Reaction to Fire: Class 1

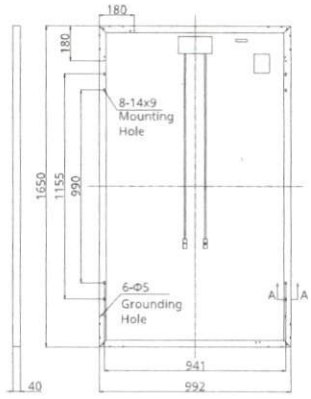
* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 15 GW deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

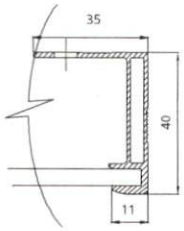
CANADIAN SOLAR INC.
2430 Camino Ramon, Suite 240 San Ramon, CA, USA 94583-4385 | www.canadiansolar.com/na | sales.us@canadiansolar.com

ENGINEERING DRAWING (mm)

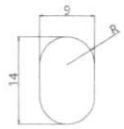
Rear View



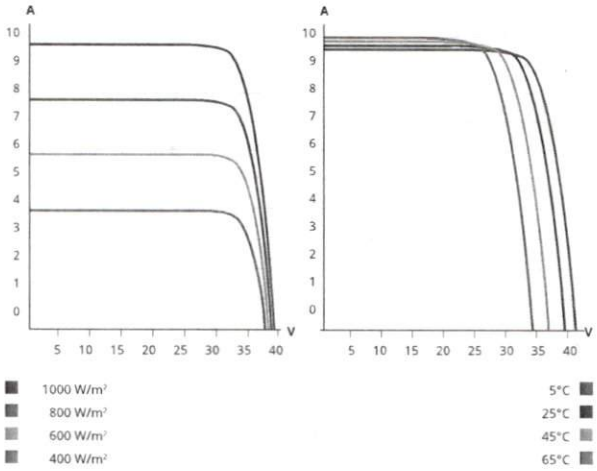
Frame Cross Section A-A



Mounting Hole



CS6K-295MS / I-V CURVES



ELECTRICAL DATA | STC*

CS6K	290MS	295MS	300MS
Nominal Max. Power (Pmax)	290 W	295 W	300 W
Opt. Operating Voltage (Vmp)	32.1 V	32.3 V	32.5 V
Opt. Operating Current (Imp)	9.05 A	9.14 A	9.24 A
Open Circuit Voltage (Voc)	39.3 V	39.5 V	39.7 V
Short Circuit Current (Isc)	9.67 A	9.75 A	9.83 A
Module Efficiency	17.72 %	18.02 %	18.33 %
Operating Temperature	-40°C ~ +85°C		
Max. System Voltage	1000 V (IEC) or 1000 V (UL)		
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)		
Max. Series Fuse Rating	15 A		
Application Classification	Class A		
Power Tolerance	0 ~ + 5 W		

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline, 6 inch
Cell Arrangement	60 (6×10)
Dimensions	1650×992×40 mm (65.0×39.1×1.57 in)
Weight	18.2 kg (40.1 lbs)
Front Cover	3.2 mm tempered glass
Frame Material	Anodized aluminium alloy
J-Box	IP67, 3 diodes
Cable	4 mm² (IEC) or 4 mm² & 12 AWG 1000 V (UL), 1000 mm (39.4 in)
Connector	T4 (IEC/UL)
Per Pallet	26 pieces, 520 kg (1146.4 lbs)
Per container (40' HQ)	728 pieces

ELECTRICAL DATA | NOCT*

CS6K	290MS	295MS	300MS
Nominal Max. Power (Pmax)	210 W	213 W	216 W
Opt. Operating Voltage (Vmp)	29.0 V	29.2 V	29.4 V
Opt. Operating Current (Imp)	7.25 A	7.30 A	7.35 A
Open Circuit Voltage (Voc)	36.2 V	36.4 V	36.6 V
Short Circuit Current (Isc)	7.74 A	7.83 A	7.92 A

* Under Nominal Operating Cell Temperature (NOCT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.39 % / °C
Temperature Coefficient (Voc)	-0.30 % / °C
Temperature Coefficient (Isc)	0.053 % / °C
Nominal Operating Cell Temperature	45±2 °C

PERFORMANCE AT LOW IRRADIANCE

Excellent performance at low irradiance, average relative efficiency of 97.5 % from an irradiance of 1000 W/m² to 200 W/m² (AM 1.5, 25°C).

The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to on-going innovation, research and product enhancement, Canadian Solar Inc. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.

Caution: For professional use only. The installation and handling of PV modules requires professional skills and should only be performed by qualified professionals. Please read the safety and installation instructions before using the modules.

PARTNER SECTION

CANADIAN SOLAR INC. September 2016. All rights reserved, PV Module Product Datasheet V5.52P1_NA