

Module Specs:
 Sharp NU-U235F1
 Pmax: 235watts
 Voc: 37.0Vdc
 Isc: 8.6A
 Vmp: 30Vdc
 Imp: 7.84A
 Temp. Coeff. (Voc): -0.315%/°C
 Max. Fuse Rating: 15A

Rooftop Ampacity Calculations:
 Average High Temp: 36°C
 Temp. Adder (roof locations): 22°C
 Conductors in Raceway: 19 (max.)
 40A (#10AWG THHN 90°C) x .71 (Temp.)
 x .50 (Fill)=14.2A
 75A (#6AWG THHN 90°C) x .71 x .50=26.6A

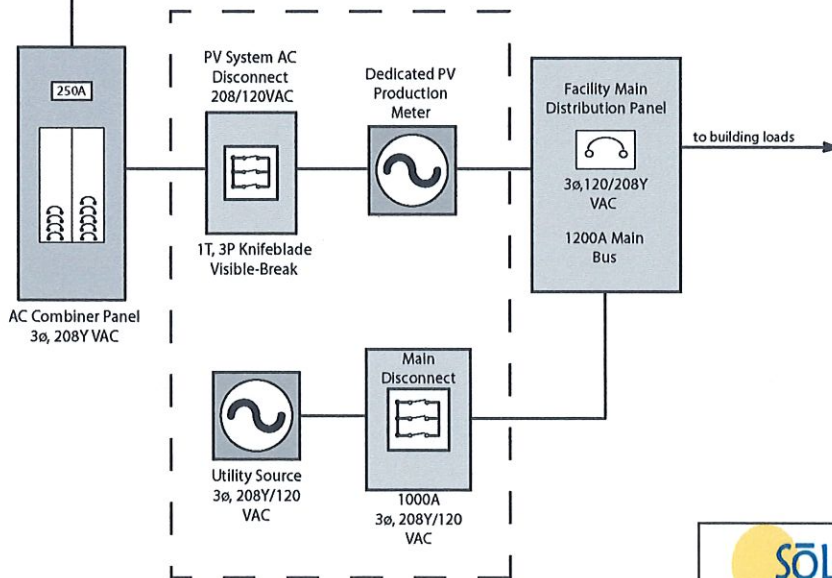
NEC PV Source Circuit Current:
 8.6A x 1.25 x 1.25=13.4A
NEC PV Output Circuit Current:
 8.6A x 3=25.8A

DC Input Specs: 7000
 Pmax: 7755watts
 Vmp: 330Vdc
 Imp: 23.52A
 Voc: 407Vdc
 Isc: 25.8A
 Vmax: 508.75Vdc

DC Input Specs: 4000
 Pmax: 4230watts
 Vmp: 270Vdc
 Imp: 23.52A
 Voc: 333Vdc
 Isc: 25.8A
 Vmax: 416.25Vdc

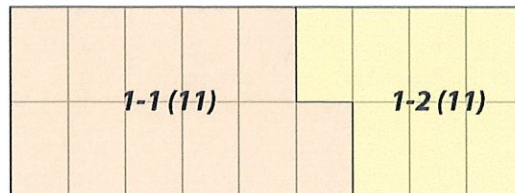
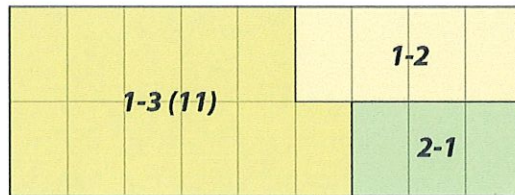
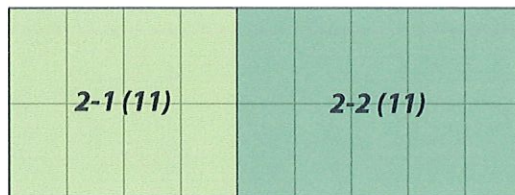
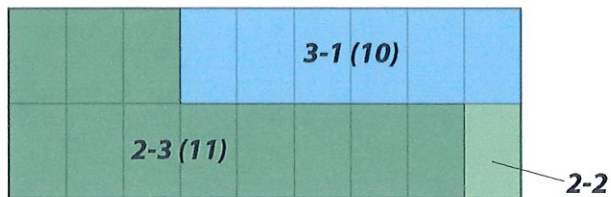
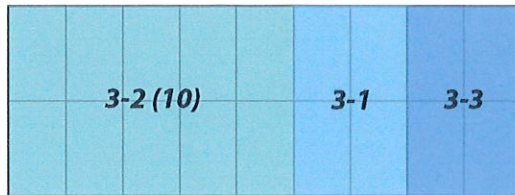
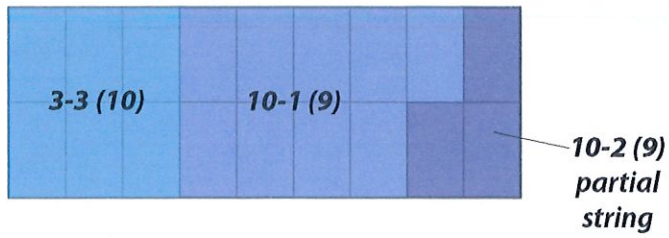
AC Output Specs:
 Max Cont. Power:
 7000watts
 Output Voltage:
 208VAC
 Max Output Current:
 34A

AC Output Specs:
 Max Cont. Power:
 4000watts
 Output Voltage:
 208VAC
 Max Output Current:
 17A

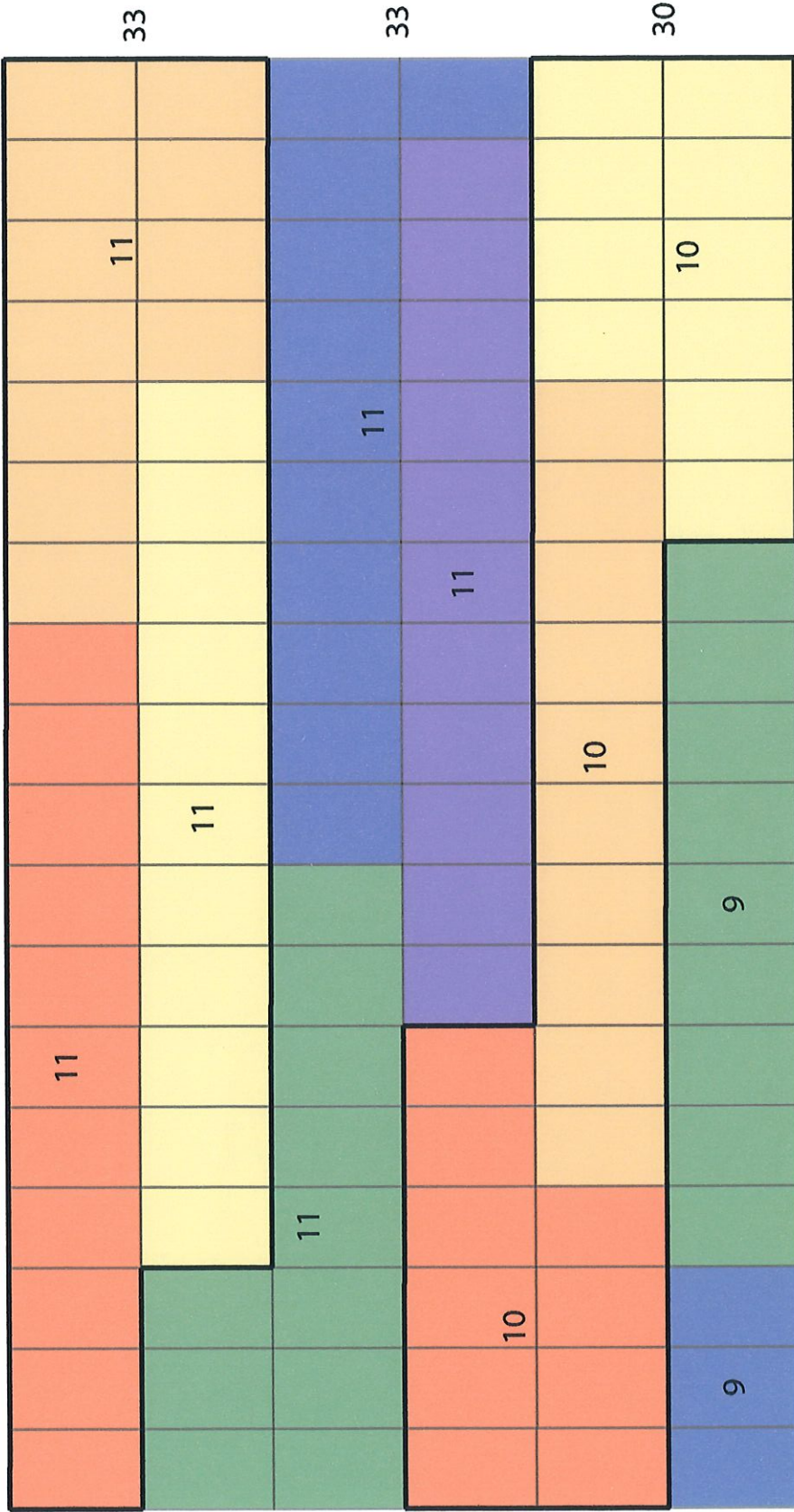


objects inside field
grouped together on
exterior west wall

 Your Power. Your Choice. PO Box 217 Carbondale, Co. 81623	Photovoltaic System 1L Diagram	
	Basalt Public Library 76.14kW System (Sharp 235w modules)	
Date: 09/14/2009	Drawn By: Z. Wilson	Page 1 of 1



First number indicates inverter,
 second indicates string, number in
 parentheses indicates modules
 per string



North and South Sloped Roof String Configuration Identical

One full str.
of (9), one
partial



 SMA

SUNNY BOY 5000US / 6000US / 7000US

- > UL 1741/IEEE 1547 compliant
- > 10 yr. standard warranty
- > Highest CEC efficiency in its class
- > Integrated load-break rated AC and DC disconnect switch
- > Integrated fused series string combiner
- > Sealed electronics enclosure & Opticool
- > Comprehensive SMA communications and data collection options
- > Ideal for residential or commercial applications
- > Sunny Tower compatible



SUNNY BOY 5000US / 6000US / 7000US

The best in their class

SMA is proud to introduce our new line of inverters updated with our latest technology and designed specifically to meet IEEE 1547 requirements. The Sunny Boy 6000US and Sunny Boy 7000US are also compatible with SMA's new Sunny Tower. Increased efficiency means better performance and shorter payback periods. All three models are field-configurable for positive ground systems making them more versatile than ever. With over 750,000 fielded units, Sunny Boy has become the benchmark for PV inverter performance and reliability throughout the world.



Technical Data

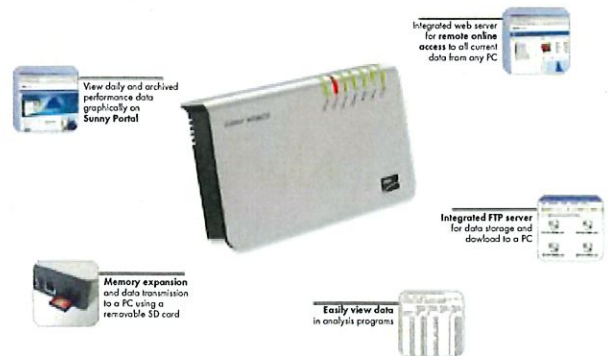
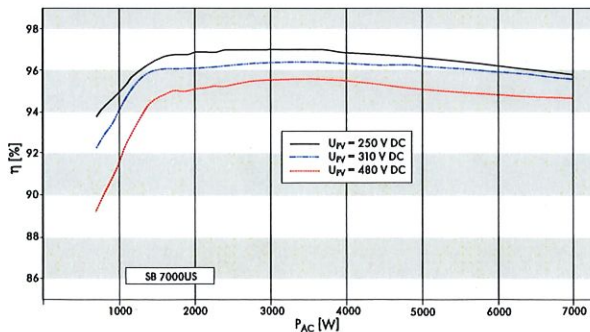
SUNNY BOY 5000US / 6000US / 7000US

	SB 5000US	SB 6000US	SB 7000US
Max. Recommended Array Input Power (DC @ STC)	6250 W	7500 W	8750 W
Max. DC Voltage	600 V	600 V	600 V
Peak Power Tracking Voltage	250 - 480 V	250 - 480 V	250 - 480 V
DC Max. Input Current	21 A	25 A	30 A
DC Voltage Ripple	< 5%	< 5%	< 5%
Number of Fused String Inputs	4	4	4
PV Start Voltage	300 V	300 V	300 V
AC Nominal Power	5000 W	6000 W	7000 W
AC Maximum Output Power	5000 W	6000 W	7000 W
AC Maximum Output Current (@ 208, 240, 277 V)	24 A, 20.8 A, 18 A	29 A, 25 A, 21.6 A	34 A, 29 A, 25.3 A
AC Nominal Voltage / Range	183 - 229V@208V 211 - 264V@240V 244 - 305V@277V	183 - 229V@208V 211 - 264V@240V 244 - 305V@277V	183 - 229V@208V 211 - 264V@240V 244 - 305V@277V
AC Frequency / Range	60Hz / 59.3Hz - 60.5Hz	60Hz / 59.3Hz - 60.5Hz	60Hz / 59.3Hz - 60.5Hz
Power Factor	1	1	1
Peak Inverter Efficiency	96.8 %	97.0 %	97.1 %
CEC weighted Efficiency	95.5 % @ 208 V 95.5 % @ 240 V 95.5 % @ 277 V	95.5 % @ 208 V 95.5 % @ 240 V 96.0 % @ 277 V	95.5 % @ 208 V 96.0 % @ 240 V 96.0 % @ 277 V
Dimensions W x H x D in inches	18.4 x 24.1 x 9.5	18.4 x 24.1 x 9.5	18.4 x 24.1 x 9.5
Weight / Shipping Weight	143 lbs / 154 lbs	143 lbs / 154 lbs	143 lbs / 154 lbs
Ambient temperature range	-13 to +113 °F	-13 to +113 °F	-13 to +113 °F
Power Consumption: standby / nighttime	< 7 W / 0.25 W	< 7 W / 0.25 W	< 7 W / 0.25 W
Topology	PWM, true sinewave, current source	PWM, true sinewave, current source	PWM, true sinewave, current source
Cooling Concept	Convection with regulated fan cooling	Convection with regulated fan cooling	Convection with regulated fan cooling
Mounting Location Indoor / Outdoor (NEMA 3R)	●/●	●/●	●/●
LCD Display	●	●	●
Lid Color: aluminum / red / blue / yellow	●/○/○/○	●/○/○/○	●/○/○/○
Communication: RS485 / Wireless	○/○	○/○	○/○
Warranty: 10-year	●	●	●
Compliance: IEEE-929, IEEE-1547, UL 1741, UL 1998, FCC Part 15 A & B	●	●	●

Specifications for nominal conditions

● Included ○ Option – Not available

Efficiency Curves



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SMA America, Inc.



**Underwriters
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fax: 1 408 689 6500

NOTICE OF AUTHORIZATION TO APPLY THE UL MARK

2007-03-26

MR. Thomas Wegener
Sma Technologie Ag
Hannoversche Str 1-5
Niestetal, 34266
Germany

E-mail: <Thomas.Wegener@SMA.DE>

Reference: File E210376 Project 06CA53944 P.O. Number 927
Product(s): USL/CNL- UL/ CSA LISTING OF NEW INVERTER MODEL(S) SB5000US, SB6000US and
SB7000US -WITH AC/DC OPTIONAL DISCONNECT SWITCH ASSEMBLY

Dear MR. Wegener,

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

UL's investigation of your product has been completed under the above project number and the subject product was determined to comply with the applicable requirements.

This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Listing Mark only at the factory under UL's Follow-Up Service Program to the subject product(s), which is (are) constructed as described below:

Similar to the subject models, which were submitted to UL for this investigation. The UL Records covering the product will be in the Follow-Up Services Procedure, File E210376, Volume 1.

To provide the manufacturer with the intended authorization to use the UL Mark, the addressee must send a copy of this Notice and all attached material to each manufacturing location as currently authorized in File E210376, Volume 1.

This authorization is effective from the date of this Notice and only for products at the indicated manufacturing locations. Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent to the indicated manufacturing locations in the near future. Please note that Follow-Up Services Procedures are sent to the manufacturers only unless the Applicant specifically requests this document.

Products that bear the UL Mark shall be identical to those that were evaluated by UL and found to comply with UL's requirements. If changes in construction are discovered, appropriate action will be taken for products not in conformance with UL's requirements and continued use of the UL Mark may be withdrawn.

Sincerely,

Adalberto Margarito

Adalberto Margarito

Senior Project Engineer
Department: 3016JSCL
Tel: 408-754-6607
Fax: 408-689-6500
E-mail: adalberto.o.margarito@us.ul.com

Reviewed by:

Christopher Flueckiger

Chris Flueckiger

Senior Project Engineer
Department: 3014CNBK





SUNNY BOY 3000US / 4000US

- > **UL1741/IEEE 1547 compliant**
- > **10 yr. standard warranty**
- > **Improved CEC efficiency**
- > **Integrated load-break rated DC disconnect switch**
- > **Integrated fused series string combiner**
- > **Sealed electronics enclosure & Opticool**
- > **Comprehensive SMA communications and data collection options**
- > **Ideal for residential or light commercial applications**
- > **Rugged cast aluminum outdoor rated enclosure**



SUNNY BOY 3000US / 4000US

The best in their class

SMA is proud to introduce our new line of inverters updated with our latest technology and designed specifically to meet IEEE 1547 requirements. Compact design makes them ideal for residential use and the integrated DC disconnect makes installation more cost effective. They are field-configurable for positive ground systems making them more versatile than ever. Increased efficiency means better performance and shorter payback periods. With over 750,000 fielded units, Sunny Boy has become the benchmark for PV inverter performance and reliability throughout the world.

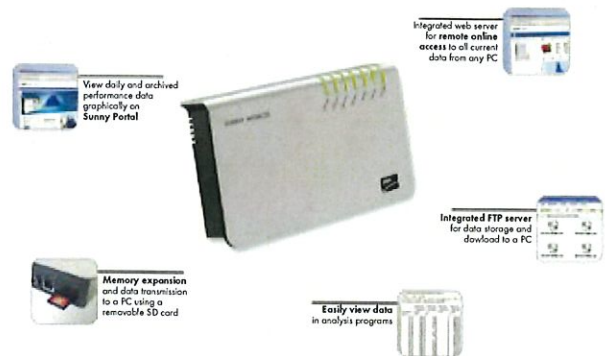
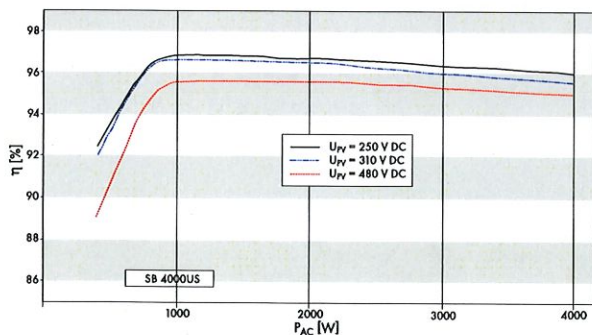


Technical Data

SUNNY BOY 3000US / 4000US

	SB 3000US	SB 4000US
Recommended Max. PV Power (Module STC)	3750 W	4375 W @ 208 V / 5000 W @ 240 V
Max. DC Voltage	500 V	600 V
Peak Power Tracking Voltage	175 - 400 V @ 208 V 200 - 400 V @ 240 V	220 - 480 V @ 208 V 250 - 480 V @ 240 V
DC Max. Input Current	17 A	18 A
DC Voltage Ripple	< 5%	< 5%
Number of Fused String Inputs	2 (inverter), 4 x 15 A (DC disconnect)	2 (inverter), 4 x 15 A (DC disconnect)
PV Start Voltage	228 V	285 V
AC Nominal Power	3000 W	3500 W @ 208 V / 4000 W @ 240 V
AC Maximum Output Power	3000 W	3500 W @ 208 V / 4000 W @ 240 V
AC Nominal Voltage / Range	15 A @ 208 V, 13 A @ 240 V 183 - 229 V @ 208 V 211 - 264 V @ 240 V	17 A 183 - 229 V @ 208 V 211 - 264 V @ 240 V
AC Frequency / Range	60 Hz / 59.3 Hz - 60.5 Hz	60 Hz / 59.3 Hz - 60.5 Hz
Power Factor	0.99 @ nominal power	0.99 @ nominal power
Peak Inverter Efficiency	96.5 %	96.8 %
CEC weighted Efficiency	95.0 % @ 208 V 95.5 % @ 240 V	95.5 % @ 208 V 96.0 % @ 240 V
Dimensions W x H x D in inches	17.8 x 13.8 x 9.3	17.8 x 13.8 x 9.3
Weight / Shipping Weight	84 lbs / 97 lbs	84 lbs / 97 lbs
Ambient temperature range	-13 to +113 °F	-13 to +113 °F
Power Consumption: standby / nighttime	< 7 W / 0.1 W	< 7 W / 0.1 W
Topology	Low frequency transformer, true sinewave, OptiCool, forced active cooling	Low frequency transformer, true sinewave, OptiCool, forced active cooling
Cooling Concept		
Mounting Location Indoor / Outdoor (NEMA 3R)		
LCD Display	●/●	●/●
Lid Color: aluminum / red / blue / yellow	●/○/○/○	●/○/○/○
Communication: RS485 / Wireless	○/○	○/○
Warranty: 10-year	●	●
Compliance: IEEE-929, IEEE-1547, UL 1741, UL 1998, FCC Part 15 A & B	●	●
Specifications for nominal conditions	● Included ○ Option - Not available	

Efficiency Curves



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 Toll Free 888 4 SMA USA

SMA America, Inc.



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NOTICE OF AUTHORIZATION TO APPLY THE UL MARK

2007-03-26

MR. Thomas Wegener
Sma Technologie Ag
Hannoversche Str 1-5
Niestetal, 34266
Germany

E-mail: <Thomas.Wegener@SMA.DE>

Reference: File E210376 Project 06CA53944 P.O. Number 927
Product(s): USJ/CNL- UL/ CSA LISTING OF NEW INVERTER MODEL(S) SB3000US and SB4000US
WITH OPTIONAL AC/ DC DISCONNECT SWITCH ASSEMBLY

Dear MR. Wegener,

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

UL's investigation of your product has been completed under the above project number and the subject product was determined to comply with the applicable requirements.

This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Listing Mark only at the factory under UL's Follow-Up Service Program to the subject product(s), which is (are) constructed as described below:

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Products that bear the UL Mark shall be identical to those that were evaluated by UL and found to comply with UL's requirements. If changes in construction are discovered, appropriate action will be taken for products not in conformance with UL's requirements and continued use of the UL Mark may be withdrawn.

Sincerely,

Adalberto Margarito

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Senior Project Engineer
Department: 3016JSCL
Tel: 408-754-6607
Fax: 408-689-6500
E-mail: adalberto.o.margarito@us.ul.com

Reviewed by:

Chris Flueckiger

Senior Project Engineer
Department: 3014CNBK



SHARP®

solar electricity

235 WATT

MULTI-PURPOSE MODULE

NEC 2008 Compliant



NU-U235F1

MULTI-PURPOSE 235 WATT
MODULE FROM THE WORLD'S
TRUSTED SOURCE FOR SOLAR.

Using breakthrough technology, made possible by nearly 50 years of proprietary research and development, Sharp's NU-235F1 solar module incorporates an advanced surface texturing process to increase light absorption and improve efficiency. Common applications include commercial and residential grid-tied roof systems as well as ground mounted arrays. Designed to withstand rigorous operating conditions, this module offers high power output per square foot of solar array.

Sharp's most powerful commercial
module manufactured today.

ENGINEERING EXCELLENCE

High module efficiency for an outstanding balance of size and weight to power and performance.

DURABLE

Tempered glass, EVA lamination and weatherproof backskin provide long-life and enhanced cell performance.

RELIABLE

25-year limited warranty on power output.

HIGH PERFORMANCE

This module uses an advanced surface texturing process to increase light absorption and improve efficiency.

INNOVATIVE

156 mm monocrystalline solar cells provide high power output. Ideal for large commercial rooftops where space is a premium.



The NU-U235F1 offers industry-leading performance for a variety of applications.

Improved Frame Technology

SHARP: THE NAME TO TRUST

When you choose Sharp, you get more than well-engineered products. You also get Sharp's proven reliability, outstanding customer service and the assurance of our 25-year limited warranty on power output. A global leader in solar electricity, Sharp powers more homes and businesses than any other solar manufacturer worldwide.

BECOME POWERFUL

235 WATT

NU-U235F1

NEC 2008 Compliant
Module output cables 12 AWG with locking connectors

ELECTRICAL CHARACTERISTICS

Maximum Power (Pmax)*	235 W
Tolerance of Pmax	+10%/-5%
Type of Cell	Monocrystalline silicon
Cell Configuration	60 in series
Open Circuit Voltage (Voc)	37.0 V
Maximum Power Voltage (Vpm)	30.0 V
Short Circuit Current (Isc)	8.60 A
Maximum Power Current (Ipm)	7.84 A
Module Efficiency (%)	14.4%
Maximum System (DC) Voltage	600 V
Series Fuse Rating	15 A
NOCT	47.5°C
Temperature Coefficient (Pmax)	-0.485%/°C
Temperature Coefficient (Voc)	-0.351%/°C
Temperature Coefficient (Isc)	0.053%/°C

*Measured at (STC) Standard Test Conditions: 25°C, 1 kW/m² insolation, AM 1.5

MECHANICAL CHARACTERISTICS

Dimensions (A x B x C below)	39.1" x 64.6" x 1.8"/994 x 1640 x 46 mm
Cable Length (L)	43.3"/1100 mm
Output Interconnect Cable**	12 AWG with MC4 Locking Connector
Weight	44.1 lbs / 20.0 kg
Max Load	50 psf (2400 Pascals)
Operating Temperature (cell)	-40 to 194°F / -40 to 90°C

**A safety lock clip (Multi Contact part number PV-SSH4) may be required in readily accessible locations per NEC 2008 690.33 (C)

QUALIFICATIONS

UL Listed	UL 1703
Fire Rating	Class C



WARRANTY

25-year limited warranty on power output
Contact Sharp for complete warranty information

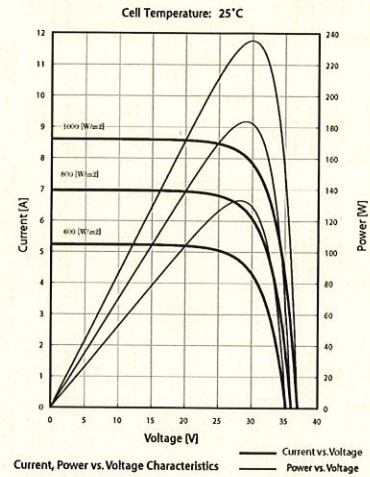
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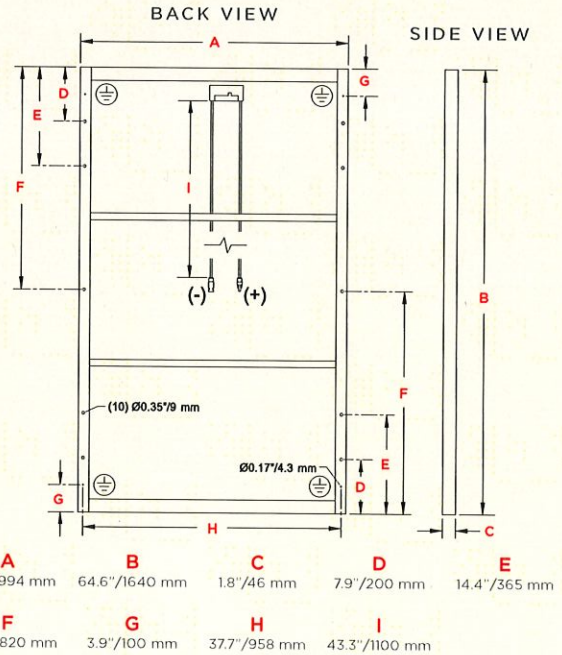
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www.sharpusa.com/solar

IV CURVES



DIMENSIONS



Contact Sharp for tolerance specifications



SMA Factory Warranty

10 Year Warranty

A ten year warranty applies to the following products: Sunny Boy SB700US, SB3000US, SB4000US, SB5000US, SB6000US, and SB7000US.

5 Year Warranty

A five year warranty applies to the following products: Sunny Boy SB700U, SB1100U, SWR1800U, SWR2100U, SWR2500U, SB3300U, SB3800U, SB6000U, SI4248, SI5048 and Windy Boy. A five year warranty also applies to Sunny Boy Control (Light Plus), Sunny Beam, Sunny WebBox, Sunny Matrix, Sunny Sensor Box, purchased after April 1, 2005.

2 Year Warranty

The two year warranty applies to the following products: Combiner Boxes, Sunny Boy Control (Light Plus), Sunny Beam, Sunny WebBox, Sunny Matrix, Sunny Sensor Box, purchased before April 1, 2005.

Extended Warranty

For the following devices you can acquire an extension of 5 or 10 years on the SMA factory warranty, from the date of the original warranty period.

5 Year Extended Warranty:	<input type="checkbox"/>	Sunny Boy 3000US/4000US	\$500
	<input type="checkbox"/>	Sunny Boy 5000US/6000US/7000US	\$750
10 Year Extended Warranty:	<input type="checkbox"/>	Sunny Boy 3000US/4000US	\$1,000
	<input type="checkbox"/>	Sunny Boy 5000US/6000US/7000US	\$1,500

Please contact the SMA service hotline for more details at 1 916 625 0870 or by fax 1 916 625 0871.

The SMA factory warranty covers any repair or replacement part costs incurred during the agreed period, beginning on the device's purchase date, subject to the conditions listed below. This is not associated with the durability warranty.



Warranty Conditions

If a device becomes defective during the relevant SMA factory warranty period, one of the following services, as selected by SMA, will be performed at no charge for materials or labor costs:

- Repair at SMA, or
- Repair On-Site, or
- Exchange for a Replacement Device (of equivalent value according to model and age).

In the case of an exchange, the remainder of the warranty eligibility will be transferred to the replacement device. In such an event, you would not receive a new certificate, as your eligibility is documented at SMA.

For determination of warranty eligibility, please submit a copy of the purchase receipt, or a copy of the warranty certificate, and if applicable, evidence of the warranty extension. The type label on the device must be completely legible. Otherwise, SMA is entitled to refuse to provide warranty services.

Please report defective devices to our service hotline at 1 916 625 0870 or by fax to 1 916 625 0871 providing a brief description of the fault. On workdays, we generally send an equivalent replacement device, packaged appropriately for transport, within 48 hours. The defective device is to be packed in this transport packaging for return transport to SMA. If the warranty applies, and if SMA has a branch, or service partner, in the country in which the device is operated, the transport costs are covered by SMA.

Exclusion of Liability

Warranty claims and liability for direct or indirect damage are excluded if arising from:

- Transport Damage,
- Incorrect Installation or Commissioning,
- failure to Observe the Maintenance Regulations and Intervals,
- Modifications, Changes or Attempted Repairs,
- Incorrect Use or Inappropriate Operation,
- Insufficient Ventilation of the Device
- failure to Observe the Applicable Safety Regulations,
- force Majeure (e.g. lightning, overvoltage, storm, fire), or
- Cosmetic Shortcomings (which do not influence the supply of energy)

Further-reaching or additional claims due to direct or indirect damage, especially claims for compensation for damages due to loss of profits or due to costs arising from disassembly and mounting, are excluded if no legally mandatory liability applies.

In addition, our general terms and conditions of delivery apply. They can be downloaded from www.SMA-America.com. If requested, we can also send you a copy of our general terms and conditions of delivery. Please contact our service hotline at 1 916 625 0870.



SHARP ELECTRONICS CORPORATION PHOTOVOLTAIC MODULE LIMITED WARRANTY

Effective October 1, 2009

This Limited Warranty applies to photovoltaic modules manufactured by SHARP with the model numbers set forth below.

Limited Warranty For Materials or Workmanship: Sharp Electronics Corporation warrants to the first consumer purchaser that this Sharp brand product (the "Product"), when shipped in its original container, will be free from defective workmanship and materials, and Sharp agrees that for a period of five (5) years from the date of purchase by the first consumer purchaser, that Sharp will, at its option, either repair the defect or replace the defective Product or part thereof with a new or remanufactured equivalent at no charge to the purchaser for parts or factory labor for the period(s) set forth below.

Limited Warranty For Power: The warranty period with respect to power output¹ continues for a total of 25 years from date of purchase by the first consumer purchaser, the first 10 years at 90% minimum rated power output and the balance of 15 years at 80% minimum rated power output. This warranty is transferable when product remains installed in original location at the time of product warranty registration.

This warranty does not apply to any alteration of the appearance of the Product that does not affect the performance or functionality of the Product, nor to the additional excluded item(s) set forth below nor to any Product, in Sharp's sole discretion, the exterior of which has been damaged or defaced, which has been subjected to misuse, abnormal service or handling, or which has been altered or modified in design or construction.

In order to enforce the rights under this limited warranty, the purchaser should follow the steps set forth below and provide proof of purchase to the servicer.

The limited warranty described herein is in addition to whatever implied warranties may be granted to purchasers by law.

ALL IMPLIED WARRANTIES INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE PERIOD(S) FROM THE DATE OF THE PURCHASE SET FORTH BELOW. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Neither the sales personnel of the seller nor any other person is authorized to make any warranties other than those described herein, or to extend the duration of any warranties beyond the time period described above on behalf of Sharp.

The warranties described herein shall be the sole and exclusive warranties granted by Sharp and shall be the sole and exclusive remedy available to the purchaser. Correction of defects, in the manner and for the period of time described herein, shall constitute complete fulfillment of all liabilities and responsibilities of Sharp to the purchaser with respect to the Product and shall constitute full satisfaction of all claims, whether based on contract, negligence, strict liability or otherwise.

In no event shall Sharp be liable, or in any way responsible, for any damages or defects in the Product which were caused by repairs or attempted repairs performed by anyone other than an authorized servicer. Nor shall Sharp be liable or in any way responsible for any incidental or consequential economic, property or special damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

¹ As adjusted to Standard Test Conditions (STC) of 1,000 W/m² irradiance, 25 C cell temperature and Air Mass 1.5.



THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

Product Model Numbers:

Modules with Crystalline Silicon Solar Cells: NT-S5E1U, NT-185U1, NT-180U1, NT-R5E1U, NT-175U1, NT-170U1, ND-216U2, ND-216U1F, ND-208U2, ND-208U1, ND-208U1F, ND-205U1, ND-200U2, ND-200U1, ND-200U1F, ND-187U2, ND-187U1, ND-187U1F, ND-181U2, ND-181U1, ND-181U1F, ND-167U1Y, ND-167U2, ND-167U1, ND-167U3, ND-167U3A, ND-167U1F, NE-175U1, NE-170U1, NE-Q5E2U, NE-165U5, NE-165U1, NE-160U1, ND-162U2, ND-162U1, ND-162U1F, ND-162U1Y, ND-160U1Z, ND-160U3, ND-L5E1U, ND-L5E1UF, ND-125U2, ND-125U1F, ND-L3E1U, ND-L3EJE, ND-L3EJEA, ND-L3EJEF, ND-123JEF, ND-123UJF, ND-60RU1, ND-62RU1, ND-62RU1F, ND-62RU2, NE-80E1U, NE-80EJE, NE-80EJEA, ND-Q0E2U, ND-N6E1U, ND-N2ECU, ND-N2ECUF, ND-N0ECU, NE-K125U2, ND-72ELU, ND-72ELUF, ND-72ERU, ND-72ERUF, ND-70ELU, ND-70ERU, ND-224U1F, ND-224U2, ND-220U1F, ND-220U2, ND-130UJF, ND-65RU1F, ND-176U1Y, ND-198U1F, ND-V230A1, NT-175UC1, NE-170UC1, ND-U230C1, ND-224UC1, ND-U224C1, ND-220UC1, ND-216UC1, ND-U216C1, ND-208UC1, ND-198UC1, ND-187UC1, ND-176UC1, ND-167UC1, ND-N2ECUC, ND-72ERUC/ND-72ELUC, NU-U208FC, NU-U180FC, NU-U230F3, NU-U235F1, NU-U235F3, NU-U240F1.

Modules with Thin Film Silicon Solar Cells: NA-V115H5, NA-V121H5, NA-V128H5, NA-V135H5, NA-V142H5, NA-V115H1, NA-V121H1, NA-V128H1, NA-V135H1.

Additional Item(s) Excluded from Warranty Coverage

Warranty coverage does not apply when:

- a) the product is installed or repaired or serviced in a manner that is contrary to Sharp's Installation Manual;
- b) the product is installed in a mobile or marine environment, subjected to improper voltage or power surges or abnormal environmental conditions (such as acid rain or other pollution);
- c) the components in the construction base on which the module is mounted are defective;
- d) external corrosion, mold discoloration or the like occurs;
- e) the product has been moved from its original installation;
- f) the model number or serial number of the product is altered, removed or rendered illegible.

Sharp's aggregate liability in connection with the Product, if any, shall not exceed the purchase price paid to Sharp for the Product or service which gave rise to the claim under the Limited Warranty.

Where to Obtain Service:

Warranty service is available at a Sharp Authorized Dealer located in the United States. To find the location of the nearest Sharp Authorized Dealer, call Sharp toll free at 1-800 SOLAR06 (800-765-2706).

Call toll free at 1-800-765-2706 to obtain a Return Authorization Number and shipping instructions. **Proof of Purchase** will be required.

What to do to Obtain Service:

Ship prepaid or carry in your Product to a Sharp Authorized Dealer. Be sure to have **Proof of Purchase** available. If you ship the Product, be sure it is insured and packaged securely. Sharp will not be responsible for the costs of de-installation or reinstallation.



DECK Terms and Conditions of Sale for Hardware Products and Software Services

The following terms and conditions ("Terms") shall be the only terms that apply to and govern any purchase order accepted by DECK Monitoring LLC (herein referred to as DECK), despite any different or additional terms or conditions contained in Customer's purchase order form or otherwise specified by Customer, unless Customer has another valid agreement with DECK.

1. Definitions

- a. "Hardware" means meters, communication gateway, communications devices and equipment, related documentation, accessories, and parts.
- b. "Product" means the Hardware and/or software listed in the attached quotation.
- c. "Specifications" means technical information about Products, including user manuals, user documentation and technical data sheets.
- d. "DECK Monitoring Site Survey Form" means a web form available at http://www.deckmonitoring.com/deployments/site_survey.php.

2. Prices

DECK's quotation constitutes an offer to sell Product upon these Terms. Prices are valid for the period set forth in the attached quotation. Prices are exclusive of, and Customer will pay, all taxes, duties, levies or fees, or other similar charges imposed on the Customer by any taxing authority.

3. Orders

Orders will be governed by these Terms and are subject to acceptance by DECK. Orders must be in writing, stating the quantities and descriptions of Product required, applicable purchase prices, and billing/shipping instructions.

4. Delivery

DECK will make reasonable efforts to ship the hardware set forth in the attached quotation so that it arrives within the time period specified on the quote. If no time period is specified 4 weeks from the latter of the date a Purchase Order is submitted or a DECK Monitoring Site Survey Form is completed will apply. If DECK is unable to meet the delivery date, Customer's sole remedy is to cancel the order.

5. Shipment, risk of loss or damage, and title

DECK, or an associated 3rd party, will pack all Products for shipping in accordance with standard commercial practices. Unless Customer has specified a carrier in its purchase order, DECK will select the carrier with the express understanding that the carrier is not the agent of DECK.



6. Acceptance

All Products sold by DECK shall be deemed accepted by Customer at the time of delivery. Notwithstanding the foregoing, if Customer notifies DECK in writing within ten (10) days of receipt of a Product that such Product is damaged, defective or cannot be made operational, and if Customer complies with the procedures governing the return of the goods set forth in these Terms, DECK shall either repair or replace such nonconforming Product, at its election, within a reasonable period of time after return of the Product to DECK. Any claims for shortage or incorrect Products must be made to DECK in writing within ten (10) days of receipt of Products.

7. Payment

Subject to credit approval, Customer shall pay, without offset, all invoiced amounts within thirty (30) days of DECK invoice date. Invoices not paid within such thirty (30) day period shall be considered overdue and may, at DECK's sole discretion, be subject to a late charge assessed at a rate equal to the lower of 2% of the unpaid balance per month or the maximum rate allowed by applicable law. DECK may discontinue performance if Customer fails to pay any sum due, if, after ten (10) days written notice, payment in full has not been made.

8. Warranty Provisions; Disclaimer

DECK does not provide any warranty on the hardware it provides to Customer. Customer is subject to the warranty and return policies of the hardware's original vender/manufacturer. DECK will facilitate the customer and may act as an intermediary for arranging the return/replacement of product from vender/manufacturer at DECK's sole discretion.

DECK provides a warranty on the software for the term of the contract as stated in customer's purchase order. During the term of the contract DECK will display a sub-set of data and make available for download in CSV format all data on DECK Monitoring provided hardware that is successfully uploaded to DECK Monitoring databases. So long as the data is successfully uploaded DECK Monitoring guarantees, subject to this terms and conditions document, the customer's dashboard and administration panel will remain active.

DECK DISCLAIMS, ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. DECK DOES NOT WARRANT THE OPERATION OF PRODUCTS WILL BE UNINTERRUPTED OR ERROR-FREE.

9. Limitation of Liability and Remedies

All DECK's equipment must be installed by a licensed electrician. DECK is not liable for damage, injury, or death which may occur based on equipment which malfunctions, is installed incorrectly, or otherwise causes damage or injury.



DECK uses the best of its abilities and judgment to gather, store, and report data to its customers. However, data reported may contain errors, and data loss may occur, and reports may be inaccurate based on errors made by DECK and associated 3rd party companies. DECK is not liable for damages or financial loss which may occur from the errors described above.

DECK does not guarantee the privacy of user's data. Data may be viewed by other parties due to user's error, sharing passwords, or not logging out of the software. Data may also be viewed publically on user's Dashboards that do not have the password protected option enabled via the internet. Data may be compromised by unauthorized access from hackers or others who do not have expressed permission to view the data. DECK may share data with the installers / integrators / developers / utilities who use that data to provide better service, maintenance, and incentives based off the systems performance.

IN NO EVENT WILL DECK'S LIABILITY IN CONNECTION WITH THE PRODUCTS OR OTHERWISE EXCEED THE AMOUNTS ACTUALLY PAID TO DECK FOR THE PRODUCTS GIVING RISE TO SUCH LIABILITY. THESE LIMITATIONS APPLY TO ALL CAUSES OF ACTION IN THE AGGREGATE. DECK SHALL NOT BE LIABLE TO CUSTOMER FOR ANY INDIRECT, EXEMPLARY, SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND ARISING IN ANY WAY, EVEN IF DECK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND NOTWITHSTANDING THE FAILURE OF ANY LIMITED REMEDY OF ITS ESSENTIAL PURPOSE. THE REMEDIES IN THESE TERMS ARE CUSTOMER'S SOLE AND EXCLUSIVE REMEDIES.

10. General

- a. Neither party shall be liable for delays or failure to meet its obligations pursuant to this Agreement due to causes beyond the party's reasonable control and not caused by the negligence of such party.
- b. Customer may not assign any rights or obligations hereunder without prior written consent from DECK, and any such assignment shall be null and void.
- c. DECK is not liable for damages that are a result of data downtime, even if the downtime is due to Product error.
- d. DECK does not guarantee the 3rd party server that hosts the DECK data and software will not experience downtime, resulting in the inability to access DECK web pages, and DECK data. DECK will take all reasonable business measures to rectify such situations.
- e. Customer who exports, re-exports or imports Products, technology or technical data purchased hereunder, assumes responsibility for complying with applicable laws and regulations, and for obtaining required export and import authorizations.
- f. DECK may suspend performance if Customer is in violation of any applicable law or regulation.
- g. The rights and obligations of the parties under this Agreement shall not be governed by the 1980 U.N. Convention on Contracts for the International Sale of Goods; rather such rights and obligations shall be governed by and construed in accordance with the laws of the United States and the State of Oregon as applied to agreements made, entered into and to be performed entirely within Oregon between Oregon residents.



- h. In the event that any dispute or controversy between the parties arises out of or is related to these Terms, whether in contract or tort, such controversy shall be subject to the exclusive jurisdiction in any state or federal court located in Oregon.
- i. If any term or provision herein is determined to be illegal or unenforceable, the validity or enforceability of the remainder of the terms or provisions herein will remain in full force and effect.
- j. These Terms and any related quotation constitute the entire agreement between DECK and Customer, and supersede any previous communications, representations or agreements between the parties, whether oral or written, regarding transactions hereunder.