

SUNNY BOY 3.0-US / 3.8-US / 5.0-US / 6.0-US / 7.0-US / 7.7-US



- Value-Added Improvements**
 - Superior protection technology for constructive modularized design
 - Advanced AFD compliant to UL 1699B for one fault protection
- Reduced Labor**
 - New installation Assistant with direct access via smartphone monitors time in the field
 - Advanced communication interface with fewer components reduces 50% labor step and wiring
- Optimized Power Production**
 - Shading, Smart generation shade management solution, produces more power than alternatives
 - Reduced component count provides maximum system reliability
- Trouble-Free Service**
 - SMA Service Mobile App provides simplified, supported field service
 - Equipped with SMA Smart Connected, a predictive maintenance that is integrated into Sunny Portal

SUNNY BOY 3.0-US / 3.8-US / 5.0-US / 6.0-US / 7.0-US / 7.7-US Power with a purpose

The residential PV market is changing rapidly. Your bottom line matters more than ever—we've designed a superior residential solution to help you decrease costs at every stage of your business operations. The Sunny Boy 3.0-US/3.8-US/5.0-US/6.0-US/7.0-US/7.7-US join the SMA lineup of high-power solar technology backed by the world's #1 service team. This improved residential solution features Shadefix, SMA's proprietary technology that optimizes system performance. Shadefix also provides superior power production with a reduced component count versus competitors, which provides maximum reliability. No other optimized solution generates more power or is as easy as systems featuring SMA Shadefix and SunSpec certified devices. Finally, SMA Smart Connected will automatically detect errors and initiate the repair and replacement process so that installers can reduce service calls and save time and money.

www.SMA.America.com



Technical Data	Sunny Boy 4.0-US		Sunny Boy 7.0-US		Sunny Boy 7.7-US	
	4.0 US	4.0 US	7.0 US	7.0 US	7.7 US	7.7 US
Input (DC)						
Max. PV power	9600 Wp					
Max. DC voltage	1500 V					
Rated MPPT voltage range	220 - 480 V					
MPPT operating voltage range	150 - 850 V					
Max. DC voltage / max. voltage	1500 V / 1500 V					
Max. operating input current per MPPT	16 A					
Max. operating current per MPPT	32 A					
Output (AC)						
AC output power	3200 W	6000 W	6600 W	7000 W	6600 W	7600 W
Max. AC output power	3200 W	6000 W	6600 W	7000 W	6600 W	7600 W
Rated voltage / adjustable	208 V / 208 V	240 V / 240 V	240 V / 240 V	240 V / 240 V	240 V / 240 V	240 V / 240 V
AC voltage range	183 - 259 V	217 - 268 V	217 - 268 V	217 - 268 V	217 - 268 V	217 - 268 V
AC grid frequency	50/60 Hz / 50/60 Hz					
Max. output current	23.0 A	25.0 A	27.5 A	29.2 A	27.5 A	32.0 A
Power factor (cos φ) / harmonics	1 / < 4 %					
Number of MPPT trackers / string per MPPT module	1 / 1					
Efficiency						
Max. efficiency	97.5 %	97.5 %	97.5 %	97.5 %	97.5 %	97.5 %
DC efficiency	96.5 %	97.0 %	96.5 %	97.0 %	96.5 %	97.0 %
Features						
DC disconnect device / DC disconnect polarity protection	✓ / ✓					
Ground fault monitoring / GFI monitoring	✓ / ✓					
AC output protection	✓					
High-voltage residual current monitoring (ARCIS)	✓					
AC fault current limiter (PCC)	✓					
Residual current / zero-voltage protection	1 / 1					
Dimensions (W / H / D) in mm (in)	633 x 770 x 198 (25.3 x 30.3 x 7.8)					
Weight / packaging weight	18.5 kg (40.8 lb) / 20.5 kg (45.2 lb)					
Temperature range: operating / storage	-25°C / -40°C to 60°C / 125°C					
Environmental protection class	IP 65 (NEMA 4)					
Max. altitude / typical	3000 m (9843 ft)					
Internal power consumption at night	< 5 W					
Warranty / warranty coverage	10 years / 25 years					

POWER+ SOLUTION

The SMA Power+ Solution combines legendary SMA inverter performance and SunSpec certified shutdown devices in one cost-effective, comprehensive package. In addition, SMA Shadefix technology optimizes power production and provides greater reliability than alternatives.

This rapid shutdown solution fulfills UL 1741, NEC 2014, and NEC 2017 requirements and is certified to the power line-based SunSpec Rapid Shutdown communication signal over DC wires, making it the most simple and cost-effective rapid shutdown solution on the market.

Visit www.SMA-America.com for more information.



- Q.PEAK TECHNOLOGY: LOW LEVELLED COST OF ELECTRICITY**
Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 21.1%.
- INNOVATIVE ALL-WEATHER TECHNOLOGY**
Custom cells, optimized for weather with moisture low-light and temperature tolerance.
- INSURING HIGH PERFORMANCE**
Long-term yield security with Anti-LE and Anti-RO Technology, Hot Spot Protection and "Passivated" Quality Text.
- EXTREME WEATHER RATING**
Highly robust in extreme weather, certified for high winds (up to 140 mph) and heavy snow loading.
- A RELIABLE INVESTMENT**
Includes 20-year product warranty, and 25-year linear performance warranty.
- STATE OF THE ART MONITORING TECHNOLOGY**
Q.PEAK DUO-G6+ features cutting-edge cell separation and intelligent wiring with Q.PEAK Technology.

THE IDEAL SOLUTION FOR:

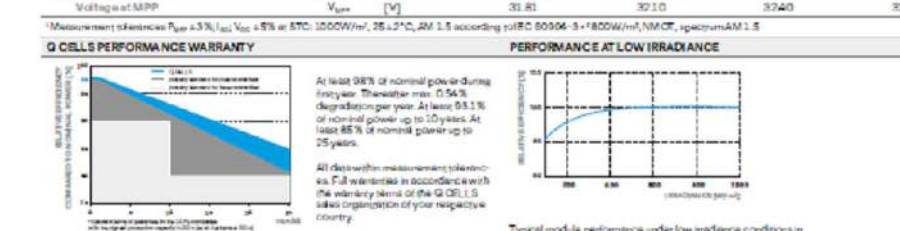


Engineered in Germany



MECHANICAL SPECIFICATION	
Panel	660 x 470 x 3.0 mm (26.0 x 18.5 x 0.12 in)
Weight	4.0 kg (8.8 lb)
Front Cover	3.0 mm (0.12 in) tempered glass, anti-reflective, self-cleaning
Back Cover	Black anodized aluminum
Frame	Aluminum
Cell	60 cells (6x10) monocrystalline silicon, 156 mm (6.14 in) square
Connector	4-pin MC4 compatible, 15A, 1000VDC, 1000VAC, 1000VDC, 1000VAC, 1000VDC, 1000VAC
Dimensions	660 x 470 x 3.0 mm (26.0 x 18.5 x 0.12 in)

ELECTRICAL CHARACTERISTICS					
POWER CLASS		340		345	330
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS (STC) (POWER TOLERANCE: ±0.5%)					
Maximum	Power (Wp)	P _{max}	340	345	330
	Open Circuit Voltage	V _{oc}	40.0	40.0	40.0
	Short Circuit Current	I _{sc}	9.5	9.5	9.5
	Maximum Power Point Voltage	V _{mp}	32.0	32.0	32.0
	Maximum Power Point Current	I _{mp}	10.6	10.6	10.6
Minimum	Temperature Coefficient of P _{max}	α _{Pmax}	-0.40 %/°C	-0.40 %/°C	-0.40 %/°C
	Temperature Coefficient of V _{oc}	α _{Voc}	-0.25 %/°C	-0.25 %/°C	-0.25 %/°C
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS (NOMO)					
Maximum	Power (Wp)	P _{max}	294.5	298.0	290.0
	Open Circuit Voltage	V _{oc}	40.0	40.0	40.0
	Short Circuit Current	I _{sc}	9.5	9.5	9.5
	Maximum Power Point Voltage	V _{mp}	32.0	32.0	32.0
	Maximum Power Point Current	I _{mp}	9.0	9.0	8.8



TYPICAL PERFORMANCE RATINGS	
Temperature Coefficient of Pmax	-0.40 %/°C
Temperature Coefficient of Voc	-0.25 %/°C
Temperature Coefficient of Isc	+0.05 %/°C
Temperature Coefficient of Imp	-0.05 %/°C
Temperature Coefficient of Vmp	-0.05 %/°C
Temperature Coefficient of Pmp	-0.05 %/°C
Temperature Coefficient of Pmax	-0.40 %/°C
Temperature Coefficient of Voc	-0.25 %/°C
Temperature Coefficient of Isc	+0.05 %/°C
Temperature Coefficient of Imp	-0.05 %/°C
Temperature Coefficient of Vmp	-0.05 %/°C
Temperature Coefficient of Pmp	-0.05 %/°C

QUALIFICATIONS AND CERTIFICATIONS	
UL 1741, UL 1741-1, UL 1741-2, UL 1741-3, UL 1741-4, UL 1741-5, UL 1741-6, UL 1741-7, UL 1741-8, UL 1741-9, UL 1741-10, UL 1741-11, UL 1741-12, UL 1741-13, UL 1741-14, UL 1741-15, UL 1741-16, UL 1741-17, UL 1741-18, UL 1741-19, UL 1741-20, UL 1741-21, UL 1741-22, UL 1741-23, UL 1741-24, UL 1741-25, UL 1741-26, UL 1741-27, UL 1741-28, UL 1741-29, UL 1741-30, UL 1741-31, UL 1741-32, UL 1741-33, UL 1741-34, UL 1741-35, UL 1741-36, UL 1741-37, UL 1741-38, UL 1741-39, UL 1741-40, UL 1741-41, UL 1741-42, UL 1741-43, UL 1741-44, UL 1741-45, UL 1741-46, UL 1741-47, UL 1741-48, UL 1741-49, UL 1741-50, UL 1741-51, UL 1741-52, UL 1741-53, UL 1741-54, UL 1741-55, UL 1741-56, UL 1741-57, UL 1741-58, UL 1741-59, UL 1741-60, UL 1741-61, UL 1741-62, UL 1741-63, UL 1741-64, UL 1741-65, UL 1741-66, UL 1741-67, UL 1741-68, UL 1741-69, UL 1741-70, UL 1741-71, UL 1741-72, UL 1741-73, UL 1741-74, UL 1741-75, UL 1741-76, UL 1741-77, UL 1741-78, UL 1741-79, UL 1741-80, UL 1741-81, UL 1741-82, UL 1741-83, UL 1741-84, UL 1741-85, UL 1741-86, UL 1741-87, UL 1741-88, UL 1741-89, UL 1741-90, UL 1741-91, UL 1741-92, UL 1741-93, UL 1741-94, UL 1741-95, UL 1741-96, UL 1741-97, UL 1741-98, UL 1741-99, UL 1741-100	

S-5!® The Right Way!™

ProteaBracket™
A versatile bracket for mounting solar PV to trapezoidal roof profiles.

ProteaBracket™ is now made in aluminum. Still the most versatile trapezoidal metal roof attachment solution on the market, the S-5! ProteaBracket™ just got better!

The bracket features an adjustable attachment base and module attachment options to accommodate different roof profile dimensions and mounting options.

Our pre-applied EPDM gasket with peel and stick adhesive makes installation a snap, ensuring accurate and secure placement the first time.

With no messy sealants, faster installation, and a weather-proof fit, ProteaBracket™ offers you the most versatile solar attachment solution available.

Features and Benefits

- 34% lighter - saves on shipping
- Stronger L-Foot™
- Load-tested for engineered application
- Corrosion resistant materials
- Adjustable - Fits rib profiles up to 3"
- Peel and Stick prevents accidental shifting during installation
- Fully pre-assembled
- 25-year warranty*

*ProteaBracket™ can be used for rail mounting or "direct-attach" with S-5! PVKIT™

*When ProteaBracket™ is used in conjunction with the S-5! PVKIT™, it is warranted for 25 years against material and workmanship defects.

*See www.S-5.com for details.

S-5!® The Right Way!™

ProteaBracket™ is the perfect solar attachment solution for most trapezoidal rib, exposed fastener metal roof profiles.

ProteaBracket™ is compatible with common metal roofing materials and comes with a pre-applied EPDM gasket on the base.

Note: All four pre-punched holes must be used to achieve tested strength. Fasteners are provided.

For design assistance, ask your distributor, or visit www.S-5.com for the independent lab test data that can be used for load-critical designs and applications. Also, please visit our website for more information including metallurgical compatibilities and specifications.

5-5! holding strength is unmatched in the industry.

Multiple Attachment Options:

Side Mount Rail

Bottom Mount Rail

w/ S-5! PVKIT™ (rail-less)

INSTALLATION:

No surface preparation needed. (1) Peel away pre-applied adhesive and debris. (2) Peel off adhesive release paper. (3) Align and mount bracket directly onto crown of panel. (4) Secure bracket through pre-punched holes, using pre-installed S-5! screws.

ProteaBracket™ and the S-5! PVKIT™ 2.0 mounted on a trapezoidal roof profile.

S-5! Warning! Please use this product responsibly! Distributed by

The SnapNrack Ultra Rail is a sleek, lightweight rail solution for mounting solar modules on the roof.

The Entire System is a Snap to Install

- New Ultra Rail Mounts include snap-in brackets for attaching rail
- Compatible with all the SnapNrack Mid Clamps and End Clamps customers love
- Universal End Clamps and snap-in End Caps provide a clean look to the array edge

Unparalleled Wire Management

- Open rail channel provides room for running wires resulting in a long-lasting quality install
- Includes Junction Boxes, Universal Wire Clamps, MLPE Attachment Kits, and Conduit Clamps
- System is fully bonded and listed to UL 2703 Standard

The Largest Span Capabilities of any Light Rail Solution

This table was prepared in compliance with applicable engineering codes and standards. Values are based on the following:

- ASCE 7-10
- Chapter 30 Wind Loads & Chapter 7 Snow Loads
- Roof Slope: 7 - 27 deg
- Roof Height: 0 - 50 ft
- Exposure: D
- Roof Zone: I
- Module Orientation: Portrait
- Roof Type: Comp

Visit SnapNrack.com for detailed span tables and certifications.

engineering codes and standards.

Values are based on the following:

- ASCE 7-10

	10	12	15	18	20	25	30	35	40	45	50	55	60	65	70	75	80
0																	
5																	
10																	