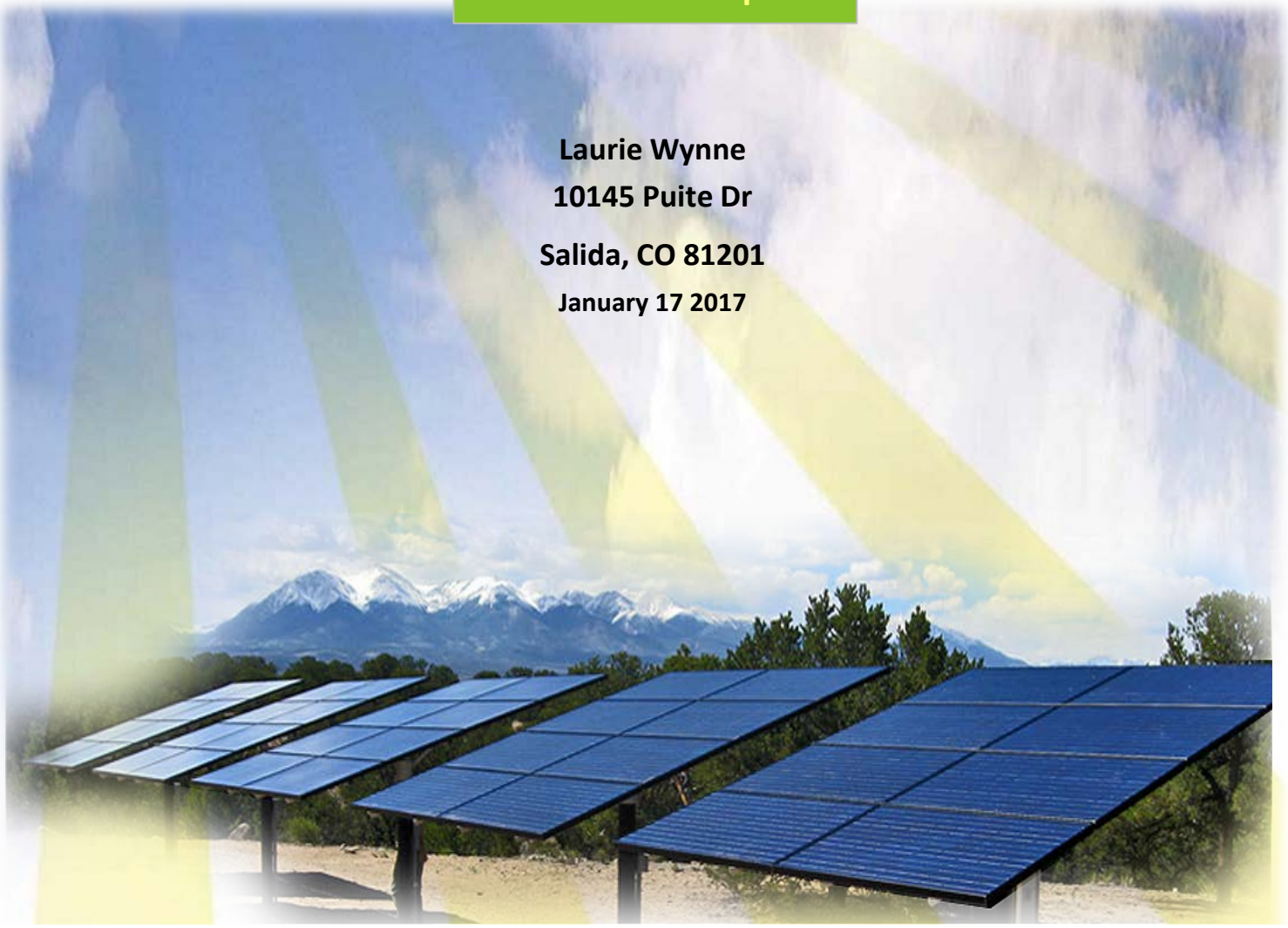
Photovoltaic Proposal



Laurie Wynne
10145 Puite Dr
Salida, CO 81201
January 17 2017

SALIDA, CO
PEAK SOLAR DESIGNS
WWW.PEAKSOLARDESIGNS.COM

YOUR RENEWABLE ENERGY SPECIALISTS
Celebrating Over 1 MEGAWATT of Grid-Tie Installations in Chaffee County!
CUSTOM PV SYSTEM DESIGN & INSTALLATION

Providing Renewable Energy to Central Colorado and the Upper Arkansas River Valley

127 Park Ave
Salida, CO 81201
Mobile (719) 429-4347
Phone/Fax (719) 539-6918
Tim@peaksolardesigns.com

Company Profile

Founded in 2004, Tim Klco has taken Peak Solar Designs from a hobby to the most widely recognized solar company in Chaffee County. With the simple goal of giving homeowners and businesses the opportunity to empower themselves while saving money at the same time, Peak Solar Designs has installed hundreds of systems in the Arkansas River Valley.

Our success is built upon the satisfaction of our customers. This isn't just our business, it's our mission. Our commitment to making solar accessible is deep-rooted, long-term, and our fully-established business is growing every year. In 2013 and 2014 Peak Solar Designs was awarded the prestigious honor of being one of the top 250 Solar Contractors out of 6,500 nationwide. So when you choose Peak Solar Designs, you know you're in very good hands.

Peak Solar Designs offers the most reliable turnkey systems in Chaffee County by using these basic principles:

DESIGN – With Peak Solar Designs , there is no room for error. Each system is meticulously designed to meet the specific needs of the project.

SUPPLY – We use only the leading materials available in the solar industry. All materials used are evaluated to meet the highest reliability standards in the Photovoltaic Industry.

EXECUTION - The process of installing and integrating the solar systems demands experience, skill, and professionalism. Our team deals, on a daily basis, with the construction and implementation of our solar systems in all aspects of the construction project.

SERVICE AND MAINTENANCE – Peak Solar Designs works closely with each client to ensure that the system operates consistently and reliably. We realize that a system that is expected to operate for many years needs fast and professional support.

How PV Systems Work:

How a Photovoltaic System Works

Solar Panels convert sunlight instantly into DC electric power

Inverter converts DC power into standard household AC power for use in the home, synchronizing with utility power whenever the electrical grid is distributing electricity.

Existing Electrical Panel distributes solar electricity and utility power throughout the house.

Utility Power is automatically provided at night and also during the day when your demand exceeds your solar production

Utility Meter actually spins backward when solar electricity generation exceeds house electricity consumption, sending power back to the electric utility for full credit at the retail rate it charges you.

Project Details

The following quotation is for a full turnkey roof mounted, grid interactive, photovoltaic system at the Laurie Wynne Residence, Salida, CO 81201

System Size: 6160 watts

Estimated Production: 10,859 KWH/year based on PV Watts

System Layout: South Facing Roof Mount

Example System:

Modules: (22) Q-Cell 280 Black Module

Inverter: (1) Sunny Boy 6.0-1-US-40 With SPS

Racking: UniRac Flush Mount Racking System with Flashings

System Proposal

The full turnkey Photovoltaic system includes:

- **Design and installation of all solar components.**
- **Permit procurement and Net Meter and/or rebate applications for local utility company.**
- **System documentation, invoices, warranty information.**
- **Solar electrical work performed and overseen by Tim Klco – NABCEP CERTIFIED # 092411-84**
- **Grid Interconnection performed by Licensed Master Electrician.**
- **No Battery Backup is quoted in the system design.**
- **Owner is responsible for checking with their accountant to verify tax credit eligibility.**

Complete System Cost = $18,189.79

Federal Tax Credit 30% = -$5,456.94

Total Investment = $12,732.85

FINANCIAL FEASIBILITY: OWNING GRID-TIED SOLAR PV

This calculator may be used to determine the financial and economic benefits (or costs) of purchasing a photovoltaic grid-tied sytem for a residence. It relates only to grid-tied solar photovoltaic systems without battery systems. ***If your utility offers per kWh REC payments, use the 'Financial Feasibility - Own REC' tab in place of this tab.***
The calculator should not be used as the only aid in deciding whether or not to purchase and install a photovoltaic grid-tied system.

INSTALLATION COSTS

Size of System (Watts)	6,160
Installation Price ($/Watt)	$ 2.95
Rebate ($/Watt)	
Federal Incentive Rate	30%
Expected Life of System (years)	25
Cost of Installation	$ 18,190
Rebate	$ -
Federal Tax Incentive	$ 5,457
Net Installed cost	$ 12,733

ANNUAL BENEFITS

Amount of Electricity Produced (kWH)	10,859	
Amount of Electricity Used (kWH)	12,000	
Cost Savings by Generating Electricity		$ 1,412
Electricity Savings (kWH)	10,859	
Rate ($/kWH)	$ 0.1300	
Revenues from Sales of Excess Electricity		$ -
Amount Sold (kWH)	0	
Rate ($/kWH)	$ 0.0200	
Net Annual Benefits		$ 1,412

COST/BENEFIT ANALYSIS (life of system)

Net Installation Costs		$ 12,733
Maintenance Costs		$ 182
Percent of Initial System Cost	1.00%	
Additional (Home) Insurance Premiums		$ 583
Rate of Inflation	2.00%	
Total Interest Paid on "Loan"		$ -
Total Costs		$ 13,497
Total Benefits		$58,790
Rate of Inflation	4.00%	

Net Financial Benefits **$45,293**

This amount shows the return on investment over the system's useful life.

Increased Value of Home Due to System		$ 10,859
Rate of Increase ($/kWH Produced)	$ 1.00	

Net Economic Benefits **$ 56,152**

This amount shows the return on investment plus the added value of the property realized at the sale of the property. It should be noted that the value of the system will decrease based on the age of the system and remaining useful life.

See Instructions Below

ANNUAL CASH OUTFLOWS

Change In (Home) Insurance Premiums		$ 18
Rate	0.1000%	
Debt Payments (or Opportunity Costs)		$ -
Amount Borrowed		
Interest Rate		
Term (Years)		
Monthly Payment	$0.00	
Total Annual Cash Outflows		$ 18

Authors:

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Simple payback year*	Return on Investment
8	362%

20 Year Cash Analysis with Rising Electric Rates and 0.5% Loss of Output per Year**

	SAVINGS***				COSTS				
YEAR	kWh - pro	Rate	Savings	Total	Insurance	Debt	Costs	Total	NET
1	10,859	$0.130	$ 1,412	$ 1,412	$ 18	$ -	$ 18	$ 18	$ 1,393
2	10,805	$0.135	$ 1,461	$ 2,872	$ 19	$ -	$ 19	$ 37	$ 2,836
3	10,751	$0.141	$ 1,512	$ 4,384	$ 19	$ -	$ 19	$ 56	$ 4,328
4	10,697	$0.146	$ 1,564	$ 5,948	$ 19	$ -	$ 19	$ 75	$ 5,873
5	10,643	$0.152	$ 1,619	$ 7,567	$ 20	$ -	$ 20	$ 95	$ 7,472
6	10,590	$0.158	$ 1,675	$ 9,242	$ 20	$ -	$ 20	$ 115	$ 9,127
7	10,537	$0.164	$ 1,733	$ 10,975	$ 20	$ -	$ 20	$ 135	$ 10,840
8	10,485	$0.171	$ 1,794	$ 12,769	$ 21	$ -	$ 21	$ 156	$ 12,613
9	10,432	$0.178	$ 1,856	$ 14,625	$ 21	$ -	$ 21	$ 177	$ 14,448
10	10,380	$0.185	$ 1,921	$ 16,546	$ 22	$ -	$ 22	$ 199	$ 16,346
11	10,328	$0.192	$ 1,987	$ 18,533	$ 22	$ -	$ 22	$ 221	$ 18,312
12	10,276	$0.200	$ 2,057	$ 20,590	$ 23	$ -	$ 23	$ 244	$ 20,346
13	10,225	$0.208	$ 2,128	$ 22,718	$ 23	$ -	$ 23	$ 267	$ 22,451
14	10,174	$0.216	$ 2,202	$ 24,920	$ 24	$ -	$ 24	$ 291	$ 24,630
15	10,123	$0.225	$ 2,279	$ 27,199	$ 24	$ -	$ 24	$ 315	$ 26,884
16	10,072	$0.234	$ 2,358	$ 29,557	$ 24	$ -	$ 24	$ 339	$ 29,218
17	10,022	$0.243	$ 2,440	$ 31,997	$ 25	$ -	$ 25	$ 364	$ 31,633
18	9,972	$0.253	$ 2,525	$ 34,523	$ 25	$ -	$ 25	$ 389	$ 34,133
19	9,922	$0.263	$ 2,613	$ 37,136	$ 26	$ -	$ 26	$ 415	$ 36,720
20	9,873	$0.274	$ 2,704	$ 39,840	$ 26	$ -	$ 26	$ 442	$ 39,398

*Based on Net Installed Cost and does not account for Revenues from Sales of Excess Electricity.

**Does not include Revenues from Sales of Excess Electricity or Maintenance Costs.

***Savings above reflect credit for total electricity savings at full retail rate (Savings).
Excess energy produced (above electricity used) is not reflected above.

Instructions:

A number should be entered into each entry box having a pale yellow background and blue colored font. 1

Some cells have default values or pull data from previous tabs of this spreadsheet.

Size of System (Watts) =>	Enter the system size in watts (to convert from Kilowatts, multiply by 1000) For example, a 4.8 KW system is 4800 watts.
Installation Price ($/Watt) =>	Enter the quoted price of installation in $$/watt (for example, 4.00).
Rebate ($/Watt) =>	Enter in value of utility company rebate/renewable energy credits (for example, 1.00).
Federal Incentive Rate =>	Enter the federal incentive rate for installing solar systems (30% for systems placed into service prior to Dec. 31, 2016). This tax incentive is multiplied times the net of the cost of installation and rebate.
Expected Life of System (years) =>	Estimate the years of service expected (average will be 20-25 years).
Amount of Electricity Produced (kWH) =>	Enter the annual photovoltaic electricity produced in kilowatt hours (kWH). A good reference is the NREL PV-WATTS Calculator available at: http://gisatnrel.nrel.gov/PVWatts_Viewer/index.html
Amount of Electricity Used (kWH) =>	Enter annual kilowatt hours calculated from utility bills.
Cost Savings by Generating Electricity, Rate =>	Enter the value of electricity per kilowatt hour (as paid to the utility company).
Revenues from Sales of Excess Electricity, Rate =>	Enter the rate that the utility company will pay for extra electricity (**typically, wholesale rate**).
Change In (Home) Insurance Premiums =>	Enter the change in annual homeowner's insurance premiums (a decrease would be entered as a negative number). An
Debt Payments (or Opportunity Costs)	
Amount Borrowed =>	Enter the amount of money that needed to be borrowed or taken from savings.
Interest Rate =>	Enter the interest rate on borrowed money or for money taken from savings.
Term (Years) =>	Enter the number of years that the money would be borrowed or taken from savings.
Maintenance Costs =>	Enter a value assigned for unexpected service calls for maintaining system. This percentage will then be multipled times the initial installation cost. Inverter(s) may need replacement during the life of the system (10-years).
Rate of Inflation =>	Enter an average rate of inflation over the life of the system.
Increased Value of Home Due to System =>	PV systems are an investment in the home, value is realized upon sale of home (California model values this at $2/watt produced in 1 year).

powered by Q.ANTUM

Q.PLUS BFR-G4.1 270-280

Q.ANTUM SOLAR MODULE

The new high-performance module Q.PLUS BFR-G4.1 is the ideal solution for all applications thanks to its innovative cell technology Q.ANTUM. The world-record cell design was developed to achieve the best performance under real conditions – even with low radiation intensity and on clear, hot summer days.

Q.ANTUM TECHNOLOGY: LOW LEVELIZED COST OF ELECTRICITY

Higher yield per surface area and lower BOS costs and higher power classes and an efficiency rate of up to 17.1 %.

INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.

ENDURING HIGH PERFORMANCE

Long-term yield security with Anti-PID Technology[1], Hot-Spot Protect and Traceable Quality Tra.Q™.

LIGHT-WEIGHT QUALITY FRAME

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).

MAXIMUM COST REDUCTIONS

Up to 10 % lower logistics costs due to higher module capacity per box.

A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance warranty[2].

EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2015

Q CELLS YIELD SECURITY
- ANTI PID TECHNOLOGY (APT)
- HOT-SPOT PROTECT (HSP)
- TRACEABLE QUALITY (TRA.Q™)

VDE Quality Tested
- high reliability
- low degradation
- frequent product surveillance

ID. 40032587

Photon
Q CELLS
Best polycrystalline solar module 2014
Q.PRO-G2 235
174 modules tested

[1] APT test conditions: Cells at -1500 V against grounded, with conductive metal foil covered module surface, 25 °C, 168 h

[2] See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:

Rooftop arrays on residential buildings

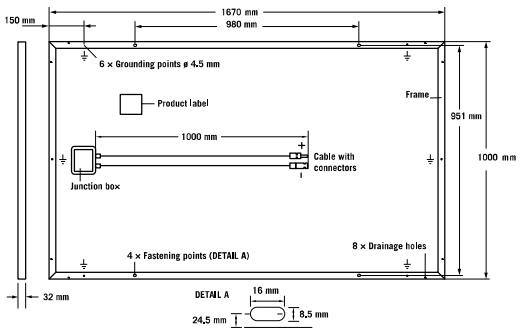
Rooftop arrays on commercial/industrial buildings

Engineered in **Germany**

Q CELLS

MECHANICAL SPECIFICATION

Format	1670 mm × 1000 mm × 32 mm (including frame)
Weight	18.8 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 × 10 Q.ANTUM solar cells
Junction box	77 mm × 90 mm × 15.8 mm Protection class IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) 1000 mm, (-) 1000 mm
Connector	MC4, IP68

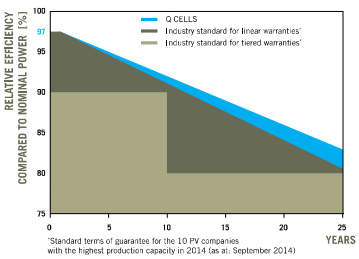


ELECTRICAL CHARACTERISTICS

POWER CLASS			270	275	280
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / -0 W)					
Minimum	Power at MPP[2]	P_{MPP}	270	275	280
	Short Circuit Current*	I_{SC}	9.29	9.35	9.41
	Open Circuit Voltage*	V_{OC}	38.46	38.72	38.97
	Current at MPP*	I_{MPP}	8.70	8.77	8.84
	Voltage at MPP*	V_{MPP}	31.04	31.36	31.67
	Efficiency[2]	η	≥ 16.2	≥ 16.5	≥ 16.8
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC[3]					
Minimum	Power at MPP[2]	P_{MPP}	199.6	203.3	207.0
	Short Circuit Current*	I_{SC}	7.49	7.54	7.58
	Open Circuit Voltage*	V_{OC}	35.89	36.13	36.37
	Current at MPP*	I_{MPP}	6.81	6.87	6.93
	Voltage at MPP*	V_{MPP}	29.30	29.59	29.87

[1] 1000 W/m², 25 °C, spectrum AM 1.5 G [2] Measurement tolerances STC ±3 %; NOC ±5 % [3] 800 W/m², NOCT, spectrum AM 1.5 G * typical values, actual values may differ

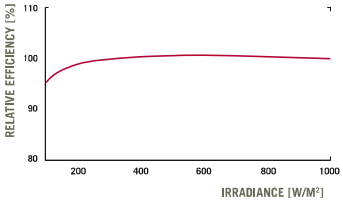
Q CELLS PERFORMANCE WARRANTY



At least 97 % of nominal power during first year. Thereafter max. 0.6 % degradation per year.
At least 92 % of nominal power after 10 years.
At least 83 % of nominal power after 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	−0.29
Temperature Coefficient of P_{MPP}	γ	[%/K]	−0.40	Normal Operating Cell Temperature	NOCT	[°C]	45

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V_{SYS}	[V]	1000	Safety Class		II
Maximum Reverse Current	I_R	[A]	20	Fire Rating		C
Wind/Snow Load (Test-load in accordance with IEC 61215)		[Pa]	4000/5400	Permitted Module Temperature On Continuous Duty		-40 °C up to +85 °C

QUALIFICATIONS AND CERTIFICATES

VDE Quality Tested, IEC 61215 (Ed. 2); IEC 61730 (Ed. 1), Application class A
This data sheet complies with DIN EN 50380.

PARTNER

NOTE: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Hanwha Q CELLS GmbH
Sonnenallee 17-21, 06766 Bitterfeld-Wolfen, Germany | TEL +49 (0)3494 66 99-23444 | FAX +49 (0)3494 66 99-23000 | EMAIL sales@q-cells.com | WEB www.q-cells.com

Engineered in **Germany**

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

Value-Added Improvements

- World's first Secure Power Supply now offers up to 2,000 W
- Full grid management capabilities ensure a utility-compliant solution for any market

Reduced Labor

- New Installation Assistant with direct access via smartphone minimizes time in the field
- Integrated disconnect simplifies equipment stocking and speeds installation

Unmatched Flexibility

- SMA's proprietary OptiTrac™ Global Peak technology mitigates shade with ease
- Multiple independent MPPTs accommodate hundreds of stringing possibilities

Trouble-Free Servicing

- Two-part enclosure concept allows for simple, expedited servicing
- Enhanced AFCI technology reduces false tripping while improving sensitivity in real arcs

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

Reduce costs across your entire residential business model

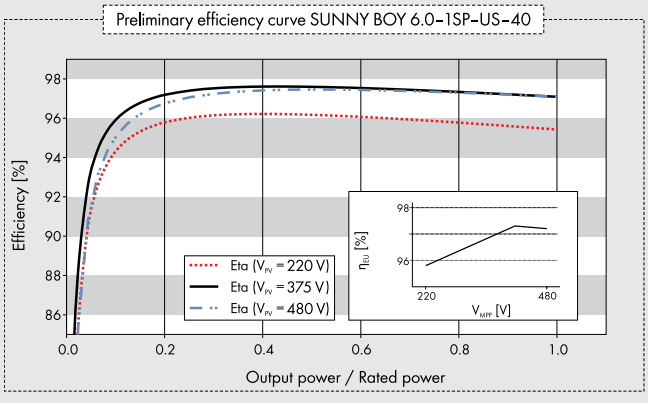
The residential PV market is changing rapidly, and we understand that your bottom line matters more than ever. That's why we've designed a superior residential solution that will help you decrease costs throughout all stages of your business operations. The Sunny Boy 3.0-US/3.8-US/5.0-US/6.0-US/7.0-US/7.7-US join the SMA lineup of field-proven solar technology backed by the world's #1 service team, along with a wealth of improvements. Simple design, improved stocking and ordering, value driven sales support and streamlined installation are just some of the ways that SMA is working to help your business operate more efficiently.

Technical data	Sunny Boy 3.0-US		Sunny Boy 3.8-US		Sunny Boy 5.0-US	
	208 V	240 V	208 V	240 V	208 V	240 V
Input (DC)						
Max. usable DC power	3100 W	3100 W	3450 W	4000 W	5150 W	5150 W
Max. DC voltage	600 V					
Rated MPP voltage range	155 - 480 V		195 - 480 V		220 – 480 V	
MPPT operating voltage range	100 – 550 V					
Min. DC voltage / start voltage	100 V / 125 V					
Max. operating input current per MPPT	10 A					
Max. short circuit current per MPPT	18 A					
Number of MPPT tracker / string per MPPT tracker	2/1				3 / 1	
Output (AC)						
AC nominal power	3000 W	3000 W	3330 W	3800 W	5000 W	5000 W
Max. AC apparent power	3000 VA	3000 VA	3330 VA	3800 VA	5000 VA	5000 VA
Nominal voltage / adjustable	208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / ●
AC voltage range	183 – 229 V	211 – 264 V	183 – 229 V	211 – 264 V	183 – 229 V	211 – 264 V
AC grid frequency	60 Hz / 50 Hz					
Max. output current	14.5 A	12.5 A	16.0 A	16.0 A	24.0 A	24.0 A
Power factor (cos φ)	1					
Output phases / line connections	1 / 2					
Harmonics	< 4 %					
Efficiency						
Max. efficiency	97.2 %	97.6 %	97.2 %	97.5 %	97.2 %	97.5 %
CEC efficiency	96 %	96.5 %	96.5 %	96.5 %	96.5 %	97 %
Protection devices						
DC disconnect device	●					
DC reverse polarity protection	●					
Ground fault monitoring / Grid monitoring	●					
AC short circuit protection	●					
All-pole sensitive residual current monitoring unit (RCMU)	●					
Arc fault circuit interrupter (AFCI)	●					
Protection class / overvoltage category	I / IV					
General data						
Dimensions (W / H / D) in mm (in)	535 x 730 x 198 (21.1 x 28.5 x 7.8)					
Packaging Dimensions (W / H / D) in mm (in)	600 x 800 x 300 (23.6 x 31.5 x 11.8)					
Weight	26 kg (57 lb)					
Packaging weight	30 kg (66 lb)					
Operating temperature range	– 25°C ...+60°C					
Noise emission (typical)	39 dB(A)					
Internal power consumption at night	< 5 W					
Topology	Transformerless					
Cooling concept	Convection					
Features						
Secure Power Supply	●					
Display (2 x 16 characters)	●					
Interfaces: Ethernet / WLAN	● / ●					
Sensor module / External WLAN antenna	○ / ○					
Warranty: 10 / 15 / 20 years	●/○/○					
Certificates and approvals	UL 1741, UL 1998, UL 1699B, IEEE1547, FCC Part 15 (Class A & B), CAN/CSA V22.2 107.1-1					
● Standard features ○ Optional features – Not available Data at nominal conditions NOTE: US inverters ship with gray lids.						
Type designation	SB3.0-1SP-US-40		SB3.8-1SP-US-40		SB5.0-1SP-US-40	

Accessories

Sensor module
MD.SEN-US-40

External WLAN antenna
EXTANT-US-40



Technical data	Sunny Boy 6.0-US		Sunny Boy 7.0-US		Sunny Boy 7.7-US	
	208 V	240 V	208 V	240 V	208 V	240 V
Input (DC)						
Max usable DC power	5400 W	6200 W	6900 W	7200 W	6900 W	7950 W
Max. DC Voltage	600 V					
Rated MPP Voltage range	220 – 480 V		245 - 480 V		270 - 480 V	
MPPT operating voltage range	100 – 550 V					
Min. DC voltage / start voltage	100 V / 125 V					
Max. operating input current per MPPT	10 A					
Max. short circuit current per MPPT	18 A					
Number of MPPT tracker / string per MPPT tracker	3 / 1					
Output (AC)						
AC nominal power	5200 W	6000 W	6660 W	7000 W	6660 W	7680 W
Max. AC apparent power	5200 VA	6000 VA	6660 VA	7000 VA	6660 VA	7680 VA
Nominal voltage / adjustable	208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / ●
AC voltage range	183 – 229 V	211 – 264 V	183 – 229 V	211 – 264 V	183 – 229 V	211 – 264 V
AC grid frequency	60 Hz / 50 Hz					
Max. output current	25.0 A	25.0 A	32.0 A	29.2 A	32.0 A	32.0 A
Power factor (cos φ)	1					
Output phases / line connections	1 / 2					
Harmonics	< 4 %					
Efficiency						
Max. efficiency	97.2 %	97.6 %	97.1 %	97.5 %	97.1 %	97.5 %
CEC efficiency	96.5 %	97 %	96.5 %	97 %	96.5 %	97 %
Protection devices						
DC disconnect device	●					
DC reverse polarity protection	●					
Ground fault monitoring / Grid monitoring	●					
AC short circuit protection	●					
All-pole sensitive residual current monitoring unit (RCMU)	●					
Arc fault circuit interrupter (AFCI)	●					
Protection class / overvoltage category	I / IV					
General data						
Dimensions (W / H / D) in mm (in)	535 x 730 x 198 (21.1 x 28.5 x 7.8)					
Packaging Dimensions (W / H / D) in mm (in)	600 x 800 x 300 (23.6 x 31.5 x 11.8)					
Weight	26 kg (57 lb)					
Packaging weight	30 kg (66 lb)					
Operating temperature range	– 25°C ...+60°C					
Noise emission (typical)	36 dB(A)		45 dB(A)			
Internal power consumption at night	< 5 W					
Topology	Transformerless					
Cooling concept	Convection		Fan			
Features						
Secure Power Supply	●					
Display (2 x 16 characters)	●					
Interfaces: Ethernet / WLAN	● / ●					
Sensor module / External WLAN antenna	o / o					
Warranty: 10 / 15 / 20 years	●/o/o					
Certificates and approvals	UL 1741, UL 1998, UL 1699B, IEEE1547, FCC Part 15 (Class A & B), CAN/CSA V22.2 107.1-1					
● Standard features o Optional features – Not available Data at nominal conditions NOTE: US inverters ship with gray lids.						
Type designation	SB6.0-1SP-US-40		SB7.7-1SP-US-40			

SAME NAME, NEW GAME

The Sunny Boy 3.0-US through 7.7-US are once again raising the bar by offering improved performance, enhanced features, and most importantly, an economical approach to residential solar. Your business model is a value chain. The new Sunny Boy-US series can help you stay competitive in an increasingly price sensitive residential market by driving down costs across all of your business operations.

SIMPLE, FLEXIBLE DESIGN

Speed the completion of customer proposals and maximize the efficiency of your design team with the Sunny Boy-US series, which provides a new level of flexibility in system design by offering:

» Hundreds of stringing configurations and multiple independent MPPTs

» SMA's proprietary OptiTrac™ Global Peak shade mitigation technology

» Diverse application options including on- and off-grid compatibility

VALUE-DRIVEN SALES ENABLEMENT

SMA wants to enable your sales team by arming them with an abundance of feature/benefit support. Show your customers the value of the Sunny Boy-US series by utilizing:

» Secure Power Supply, now with 2,000 W of opportunity power in the event of a grid outage, as an increased value-add or upsell opportunity

» SMA's 35 year history and status as the #1 global inverter manufacturer instills homeowners with peace of mind and the long-term security they demand from a PV investment

» An economical solution for shade mitigation and the challenges of complex roofs

IMPROVED STOCKING AND ORDERING

Ensure that your back office business operations run smoothly and succinctly while mitigating potential errors. The Sunny Boy-US series can help achieve cost savings in these areas by providing:

» An integrated DC disconnect that simplifies equipment stocking and allows for a single inverter part number

» All communications integrated into the inverter, eliminating the need to order additional equipment

STREAMLINED INSTALLATION AND COMMISSIONING

Expedite your operations in the field by taking advantage of the new Sunny Boy's installer-friendly feature set including:

» Direct access via smartphone and utilization of SMA's Installation Assistant, which minimizes time/labor spent in the field and speeds the path to commissioning

» Improved communication—no need to install additional equipment

» Integrated DC disconnect that simplifies onsite logistics and eliminates the need to install a separate disconnect unit, speeding overall installation time

SUPERIOR SERVICE

SMA understands the factors that contribute to lifetime PV ownership cost, that's why the Sunny Boy-US series was designed for maximum reliability and backstopped by an unmatched service offering. Benefit from:

» The new Sunny Boy's two-part enclosure concept that separates the connection unit from the power unit, which allows for simple, expedited servicing

» The #1 service team in the PV industry, as recognized by IMS research, with experience servicing an installed base of more than 40 GW