

# SunLine™

## SOLAR ELECTRIC HOME POWER SYSTEM WITH AP-100 MODULES

### Everything needed to **GENERATE CLEAN ELECTRICITY** at home!

Now almost any home can generate its own clean electricity with a complete SunChoice™ Solar Electric Home Power System from AstroPower. These packages are engineered to install quickly and reliably, and to provide years of automatic operation. AstroPower SunLine™ System benefits:

- *Make your own clean electricity*
- *Become more energy independent*
- *Spin your meter backwards*
- *Reduce your utility bills*

#### AP-100

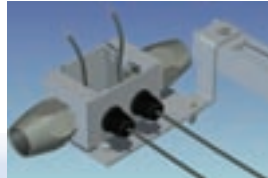
Single-crystal silicon solar solar module, features:

- 20 year performance warranty.
- Pre-wired quick-connects for easy installation.
- Attractive blue cell and backsheet with black-anodized frame.



#### LSB

Pre-assembled panel wiring boxes attach to mounting system beneath solar modules, allowing all array wiring to be completed before modules are installed, and significantly reducing installation time and possibility of wiring error.



#### AF-B

Custom-made, black-anodized aluminum mounting system with stainless hardware includes attachment options for virtually any roof.

#### Mounting Options



*Tile-Trac Foot* for low-profile surface mount on asphalt roofing or sub-tile, sealed riser mount on tile roofing.



*Machined Stanchion Feet* in 4 different lengths for flashed mounting with any membrane.



*Tilt-Up Rack* optional for flat roofs, works with any of the attachment options.

#### Inverter

Depending on application and customer preference, SunLine systems are available with:

- AEI GC-1000 and GC-3000
- Xantrex XR1500 and XR2500
- SMA Sunny Boy SWR1800 and SWR2500

See specifications on reverse side.

#### APM2

AstroPower SunChoice Power Meter, indicates:

- AC Solar production, instantaneous kW and cumulative kWh.
- AC Home consumption, instantaneous kW and cumulative kWh.

*APM2 includes split-core current transformers, signal processing unit, remodel gang-box (for installing display in wall), and dual meter display.*



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## SYSTEM PERFORMANCE

### Solar Resource Map<sup>1</sup>



### Average Monthly Energy Production<sup>2,3</sup> (AC kWh per month)

	SunLine-12	SunLine-24	SunLine-36	SunLine-48	SunLine-72	SunLine-96
Zone 1	100	200	295	395	595	790
Zone 2	115	230	345	460	695	925
Zone 3	130	260	390	520	780	1040
Zone 4	140	285	425	570	855	1140
Zone 5	155	315	470	625	940	1255
Zone 6	170	340	505	675	1015	1355

(1) PVGrid™ computer simulation calculations. (2) Estimated AC kWh of electricity generated by the system. (3) Assumes clean solar panels, no shading, true south orientation, solar panels tilted to latitude angle; includes estimated typical inverter DC/AC conversion efficiency and other system losses such as wiring and connections that are typical of all solar electric systems. Actual values may vary +/- 50% monthly and +/- 25% annually because of weather fluctuations, array orientation, shading, soiling and other specific site and installation factors. Calculations subject to change without notice due to improved engineering analysis, product changes, and other factors.

### System Parameters

SunChoice™ System		SunLine-12	SunLine-24	SunLine-36	SunLine-48	SunLine-72	SunLine-96
Number of Solar Modules		12	24	36	48	72	96
Roof Area Required For Solar Panels <sup>4</sup> (ft <sup>2</sup> )		125	250	375	500	750	1000
Array DC Rating <sup>8</sup>		1200	2400	3600	4800	7200	9600
Estimated Power Output <sup>6</sup> (watts AC)	Condition 1 <sup>7</sup>	700	1400	2200	2900	4300	5700
	Condition 2 <sup>8</sup>	800	1700	2500	3400	5100	6800

(4) Estimated area needed for solar panels, completely unshaded between 9am and 4pm in winter. (5) These values refer to maximum theoretical DC power from the solar panels only, not AC power output from the inverter. These do not reflect normal system operational losses such as temperature effects and inverter efficiency. Power Tolerance +/- 10%. STC: (Standard Test Conditions) 1000 w/m<sup>2</sup> solar irradiance, 25°C cell temperature, spectral irradiance per ASTM E892. STC conditions are used by all solar module manufacturers to rate maximum DC power of solar panels in an artificial controlled environment. (6) Estimated AC kW output, delivered as utility grid compatible AC power. Generally applicable to peak clear sky conditions in spring, summer, fall only. (7) Condition 1: 900 watts/m<sup>2</sup> solar irradiance, 32°C (90°F) air temperature, 1 m/s windspeed. (8) Condition 2: 1000 watts/m<sup>2</sup> solar irradiance, 20°C (68°F) air temperature, 1 m/s windspeed.

## SPECIFICATIONS

### Power Electronics

- There are a variety of inverter output power and voltage combinations available, depending on application.
- Inverter can be located indoors or outdoors (outdoor location should not be exposed to direct sun or rain).
- 5-year limited warranty.

Inverter Manufacturer	Inverter Model	Rated Power (AC Watts)	Input Range VDC	Output Nominal VAC
Advanced Energy	GC-1000	1000	52 to 92	120
	GC-3000	3000	52 to 92	120
Xantrex	XR1500	1500	42 to 85	240
	XR2500	2500	42 to 85	240
SMA	SWR1800	1800	140 to 400	120
	SWR2500	2500	260 to 540	240

### Solar Panel Array

#### Durability Characteristics

- 20-year limited power warranty for solar panels.
- Pre-engineered rooftop mounting systems withstand up to 125 mph wind (50 lbs/ft<sup>2</sup> equivalent loading).
- Solar panels withstand 1" hailstone impact @ 50 mph (24mm @ 80 km/h).

#### Mounting Characteristics

- Quick connect plugs between panels simplify installation.
- Easily mount above curved and flat tiles, asphalt shingles.
- Optional flashed-post system ideal for new construction, flat roofs, concrete tiles or wood shingles.
- Tilt-up leg kit available for angled mounting on flat roofs.

#### Certifications

- Modules and inverters UL Listed.
- System Approved by Florida Solar Energy Center.
- System CEC Program compliant.

**AP-100 Modules.** SunLine™ Systems feature AstroPower's attractive, high-efficiency single-crystal 100 watt modules.



**Installation Manual.**  
Features comprehensive installation, operation and permitting information.

**Owner's Manual.**  
Homeowner-specific operation, performance, safety and troubleshooting information.

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