

# SolarWorld Products & Programs

Partner and grow with the leader in solar



America's largest solar manufacturer since 1975





## Welcome to SolarWorld

At SolarWorld, we believe it's time for an energy source in harmony with our planet. We believe that solar power can create energy independence and can eliminate conflicts over resources. We believe in solar power for Americans made by Americans. We believe that it's time for a solar revolution.

SolarWorld is solely committed to solar power and has led the American solar industry for over 35 years. We were the first solar company to produce more than 1 megawatt of PV panels in one year; we built the first 1 megawatt grid-connected system in the U.S.; and we were the first to introduce a 25-year warranty back in 1997.

Today, our factory in Hillsboro, Oregon, has 350 megawatts of capacity. In Hillsboro,

we sustainably execute every step of the manufacturing process, from raw silicon to finished solar panels. Our state-of-the-art facility is fully automated and embodies decades of past solar experience to produce a panel with unmatched quality.

Our sales, marketing, customer service and engineering organizations, located in Camarillo, California, continue to innovate and champion solar across the American market.

We invite you on this journey with us.

A solar world  
is a better world





## America's solar leader

SolarWorld is the largest solar manufacturer in the United States and has been so for over 35 years. In 2010, SolarWorld's American manufacturing plants alone produced more crystalline silicon solar cells than all other U.S. solar companies combined. We believe in building the American economy and manufacturing as close to where we sell as possible. Today our factory in Hillsboro, Oregon, has the capacity to produce a solar panel every 23 seconds.

Our commitment to growing the American economy begins by purchasing raw materials from American sources, to the tune of \$310 million in 2010 alone.

Our manufacturing process starts with growing silicon crystals, then continues through cutting the crystals into wafers, creating solar cells, and finally assembling the cells into finished panels. To make this happen, day in and day out, we employ over 1,000 American workers. Most other manufacturers claiming "Made in America" only assemble on U.S. soil, shipping in components from overseas.

## SolarWorld American Manufacturing



Crystal



Wafer



Cell



Panel



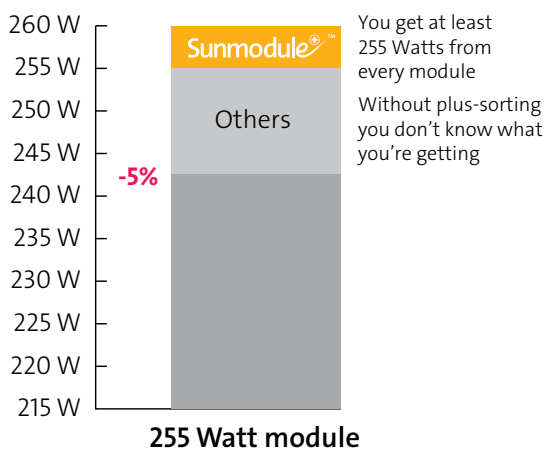
## Industry-leading quality

After 35 years of continuous optimization, our Sunmodule™ panels are recognized as the industry leader in quality. Since we control the entire manufacturing process, we ensure that the highest level of scrutiny and care goes into each and every panel. Every Sunmodule solar panel is flash-tested and plus-sorted so you won't pay for power that you don't receive. While many manufacturers rate the power of their panels with a +/- variance, we sort each panel to the power it was tested, therefore ensuring that the panel produces the name plate rating or above. We also account for light induced degradation before rating each module to ensure that there is no decrease in power

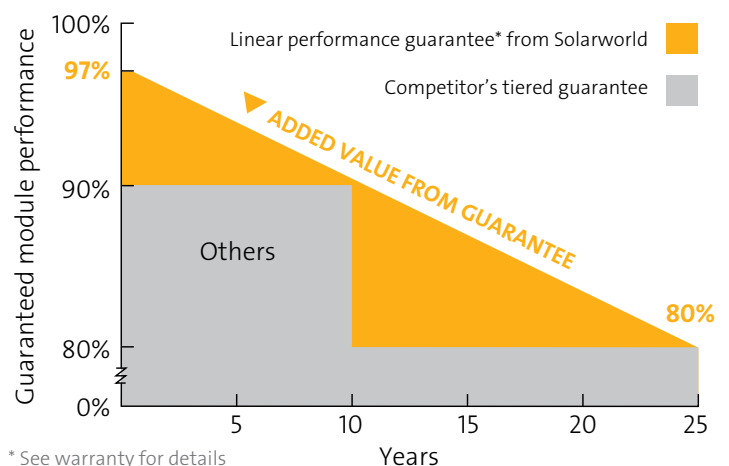
output from when the panel leaves our factory floor, to when it is installed.

Our assurance of quality and performance comes in our 25-year linear and 10-year workmanship warranties. Unlike other solar companies, our warranties give you the security of a company that has been around for longer than its warranty period. In most instances, our systems will outproduce the guaranteed levels and will continue to work significantly beyond the warranty period. Systems we installed over 30 years ago are still producing valuable energy today.

**Plus-Sorting**



**25-Year Linear Warranty**





## The world's greenest solar manufacturer



*“Sustainable development allows present generations to satisfy their needs without jeopardizing the needs of future generations.”*

– Frank Asbeck, SolarWorld CEO

SolarWorld’s commitment to sustainability goes deeper than the products we manufacture; it starts with how we manufacture. While some of our competitors are in the news for practices that harm the environment, we stand back and ask, “low cost, at what cost?” We are proud to report that we perform eco-friendly practices all the way through our production process, from raw material procurement to packaging of our finished product.

Our eco-friendly manufacturing practices were formally recognized in 2011, by the Silicon Valley Toxics Coalition, when we were ranked as the world’s greenest solar manufacturer. This organization recognized SolarWorld's achievements towards recycling, supply chain monitoring, environmental transparency, and green job generation over all other solar manufacturers.

Another testament to our environmental stewardship is our pioneering recycling efforts. Today, old panels that would have otherwise been discarded are now recycled and undergo a high-yield process of recovering constituent materials for reuse.



SolarWorld panel recycling

# PRODUCTS **SOLAR PANELS**




## Sunmodule<sup>+</sup>™

SolarWorld's high-performance Sunmodule panels have over 35 years of experience built right in. To guarantee that you get the power that you pay for, SolarWorld plus-sorts all Sunmodule panels. SolarWorld Sunmodules also come with a 25-year linear performance warranty and a 10-year workmanship warranty.

SolarWorld offers Sunmodule panels in three varieties providing you with multiple solutions to meet your customers' needs.

## Mono

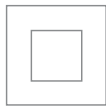
### High power density

- The most power-dense panel in the Sunmodule line
- Currently available up to 255 Wp
- Made in the USA 

### SUNMODULE CERTIFICATIONS



- Qualified, IEC 61215
- Safety tested, IEC 61730
- Periodic Inspection



### TECHNICAL DATA


#### Monocrystalline

Power	Up to 255 Wp
PTC	230.5
Efficiency	15.2 %
Mounting Options	Top
Size	65.9" x 39.4"
Weight	46.7 lbs



## Poly

### Versatile installation options

- Two frame options for different mounting methods
- Up to 8 grounding locations for easier installation
- Currently available up to 245 Wp
- Made in the USA 

## Mono Black

### The best black module on the market

- All the beauty of a black panel with the performance of a SolarWorld Sunmodule
- True black aesthetics: black frame and black backsheet
- Currently available up to 245 Wp

#### TECHNICAL DATA

	Polycrystalline
Power	Up to 245 Wp
PTC	220.1
Efficiency	14.6 %
Mounting Options	Top & Bottom
Size	65.9" x 39.4"
Weight	46.7 lbs

#### TECHNICAL DATA

	Monocrystalline Black
Power	Up to 245 Wp
PTC	221.9
Efficiency	14.3 %
Mounting Options	Top
Size	65.9" x 39.4"
Weight	46.7 lbs



## Sunmodule<sup>+</sup>™ off-grid

Rural or remote areas often do not have access to an electrical grid. SolarWorld's Sunmodules for off-grid systems provide an affordable, clean and uninterrupted energy supply. With over 35 years experience in off-grid solar, there's no better name to trust with your energy needs.

- Rural homes
- Water pumps
- Outdoor lighting
- Agriculture and more




### TECHNICAL DATA

	SW 50 off-grid	SW 80 off-grid	SW 135 off-grid
<b>Size</b>	26.8" x 26.8"	37.7" x 26.8"	59.4" x 26.8"
<b>Weight</b>	12.3 lbs	16.8 lbs	26.0 lbs
<b>Mounting options</b>	Top & bottom	Top & bottom	Top & bottom
<b>V<sub>oc</sub></b>	22.1 V	21.9 V	21.9 V
<b>V<sub>mpp</sub></b>	18.2 V	17.9 V	17.7 V
<b>I<sub>sc</sub></b>	2.95 A	4.78 A	8.16 A
<b>I<sub>mpp</sub></b>	2.75 A	4.49 A	7.69 A



## Sunfix<sup>®</sup> ground mount


Easy to configure, easy to install, easy to use. The Sunfix Ground Mount is SolarWorld's mounting solution for just about any ground installation.

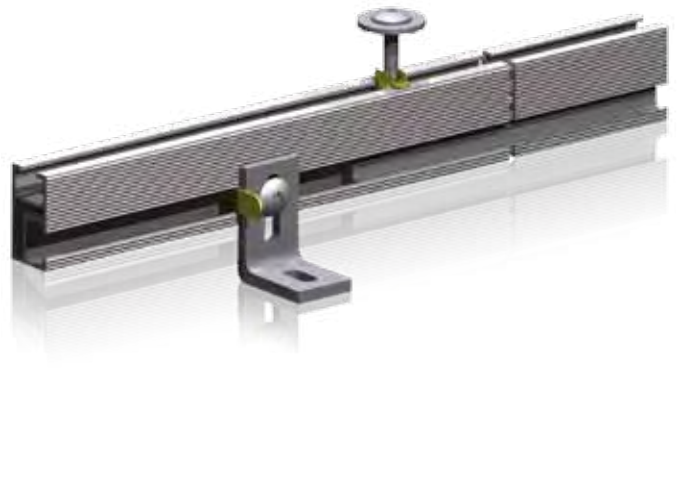
- Configurable for 5° - 40° tilt angles
- Adaptable for uneven terrain with minimal damage to top soil
- System size from 3.4 kW to multi-MW
- Use with earth-screw, driven pile, concrete-in-drilled-hole or ballast foundations
- Up to 150 mph wind and 30 lb/ft<sup>2</sup> snow loadings
- Made in the USA 



## Sunfix<sup>®</sup> plus

The SolarWorld Sunfix Plus pitched roof mounting system is optimized for SolarWorld Sunmodule panels for simple and efficient installation.

- For pitched roofs up to 45°
- Pre-assembled top and end clamps, pre-cut rail lengths and single tool installation saves time
- Versatile roofing applications: composition, concrete tile, or standing seam
- Sturdy design allows for 110 mph wind load and 50 lb/ft<sup>2</sup> snow load
- Made in the USA 





## Sunkits®

Sunkits systems are so much more than a kit or even the sum of the included components. The services and support provided by SolarWorld are unsurpassed in the industry.

- Complete SolarWorld system customized to maximize performance
- Sales proposal support
- System design and engineering
- On-site technical support
- Training support

## High quality components

Only the best, most proven products are offered in Sunkits systems.

- SolarWorld high-performance Sunmodule panels
- SMA, PV Powered or Enphase inverter options
- Sunfix and other mounting options
- Suntrol Data Logger and other monitoring options
- Additional balance of system components including grounding lugs & cables and required junction boxes

## The Sunkits Sales Process

1

Provide an in-home solar consultation

2

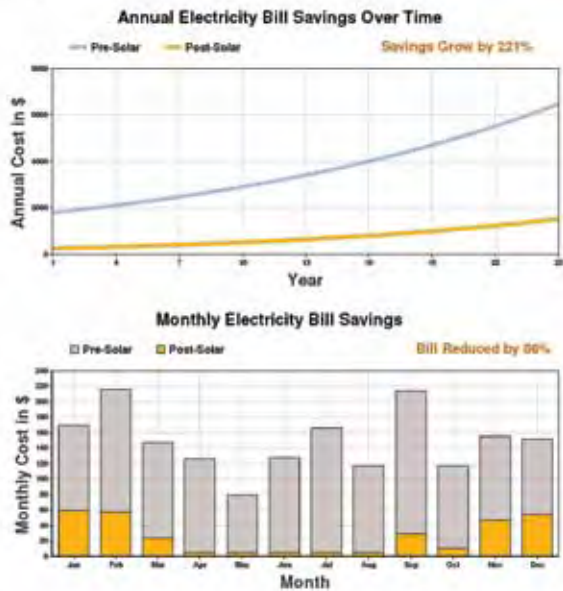
Submit a Sunkits location questionnaire

3

Receive a customized sales proposal and close the sale

4

Submit a purchase order and schedule the install



## Sales proposals

SolarWorld develops customized sales proposals for each of your potential installations. Each proposal forecasts energy production and financial returns over the system's 25-year warranty period.

- System performance estimates
- Financial and payback information
- Environmental impact analysis

## Design services

SolarWorld provides complete system design services to reduce your in-house engineering requirements.

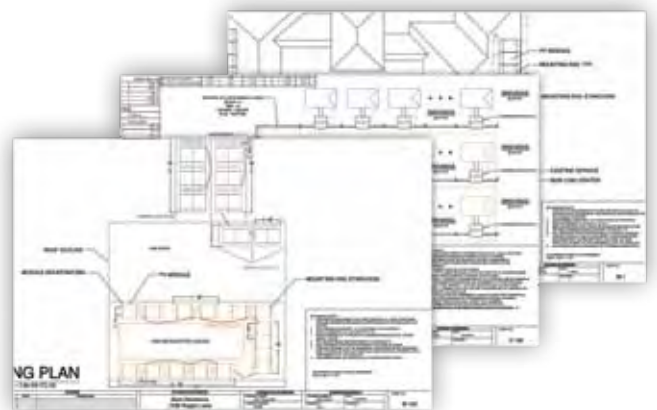
- Design package includes: mechanical layouts, electrical line drawings, and material pick list
- SolarWorld design services allow you to focus your resources on sales and installation
- SolarWorld designs incorporate solar best practices resulting from designing thousands of systems across the U.S.

5

Receive custom SolarWorld design to help with permits and installation

6

Install the Sunkits system



# PRODUCTS **MONITORING**



## Suntrol® Data Logger

The Suntrol data logger enables comprehensive monitoring of a SolarWorld system. Owners can monitor the performance of the system, the inverters, the yield forecast and degradation calculations online and at any time via smart phone, tablet or computer.

- Easy to install and configure
- No portal subscription fees
- Compatible with over 50 inverter brands
- Can accommodate up to 3 inverter manufacturers per system

### TECHNICAL DATA

	STL 200, 400, & 800
<b>Number of inverters</b>	2, 10, & 100
<b>Communications Interface</b>	RS485, Ethernet, Bluetooth (optional)
<b>Data Memory</b>	Up to 25 years



## Suntrol® Display

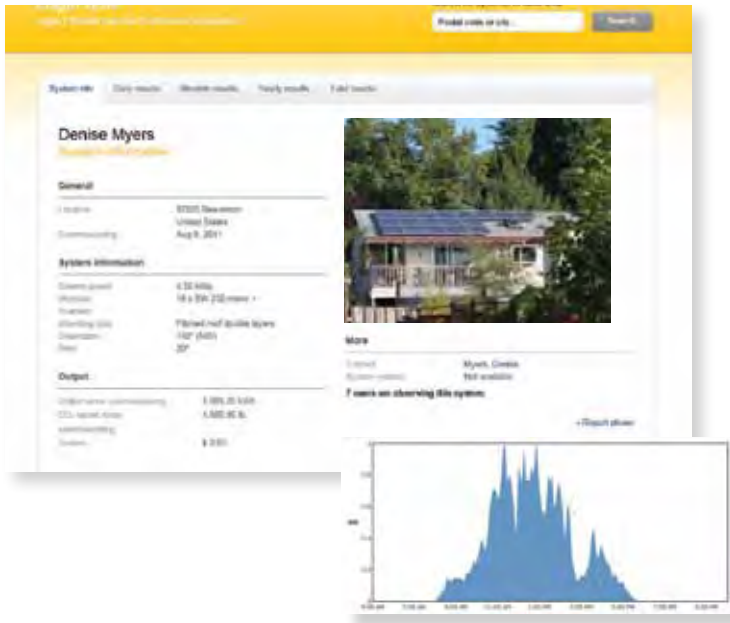
The Suntrol display provides an ideal way to publicly showcase each system's performance in real time.

The displays show current output, total energy yield and carbon dioxide reduction in a sleek, stylish design.

- Easy installation
- Real-time system performance
- Indoor and outdoor options
- Customized graphics available

### TECHNICAL DATA

	500/800 LCD & LED
<b>Dimensions (LxWxH)</b>	20" x 16" x 1.8" or 32" x 24" x 1.8"
<b>Display Type</b>	LCD or LED
<b>Input</b>	RS485, RS233 or Pulse Input



## Suntrol® Portal

The Suntrol Internet Portal can be accessed using a smart phone, tablet or a computer to view up-to-date system information. In addition to performance data and characteristics of the solar power system, the interface with the Suntrol data logger displays the daily yield per inverter. Moreover, the monthly and annual yields are graphically evaluated and recorded.

- Monitor your customers' systems with just one portal
- Use the Suntrol Portal to reference installed systems during your sales calls
- Owners can share system information with friends and family



## Suntrol® App

With Suntrol products, your customers can always keep an eye on the current output of their solar power system and regularly monitor its performance—in their home or on the go.

- Free iPad and iPhone apps—Android coming soon
- Access system information wherever you are
- Discuss your customers' system performance on the spot



 [suntrol-portal.com](http://suntrol-portal.com)

# PARTNERING **INSTALLER PROGRAMS**



## SolarWorld Installer Programs

The SolarWorld installer programs are the easiest way to become one of the leading solar installers in your area. Experienced installers are invited to become Authorized Installers and boost their growth through additional marketing support, training and lead referrals, as well as access to SolarWorld Financial Solutions.

	Authorized Installer	Commercial Authorized Installer	Registered Installer
Leads	✓	✓	Limited <sup>1</sup>
Marketing Support	✓	✓	✓
Marketing Co-op	✓	✓	✓
Event Support	✓	✓	✓ <sup>1</sup>
Product Discounts	✓	✓	
SolarWorld Financial Solutions	✓ <sup>2</sup>	✓ <sup>2</sup>	

<sup>1</sup> Some Registered Installers receive sales leads and event support depending on location and experience.

<sup>2</sup> Must be in an eligible area and be approved by lending organization.

## Registered Installer

### Benefits

- Access to high performance SolarWorld Sunkits® Systems
- System proposal and design support
- Product training
- Marketing materials

### Requirements

- Complete registration form
- Attend live or online product training
- Obtain state licenses and certifications

## Process to become Authorized

1

**Make an online inquiry:**  
[solarworld.com](http://solarworld.com)

2

**Complete Authorized Installer application**



## Authorized Residential Installer



### Benefits

- Residential sales leads
- Authorized Installer credentials
- SolarWorld Financial Solutions eligibility
- Discounted pricing
- Exclusive marketing materials
- Marketing co-op funds eligibility

### Requirements

- Maintain professional business practices
- Deliver high quality system designs and installations
- Possess a proven solar track record
- Actively promote SolarWorld as primary brand
- Maintain minimum annual sales of 100 kW
- Include SolarWorld logo on website

## Authorized Commercial Installer



### Benefits

- Commercial sales leads
- Authorized Installer credentials
- SolarWorld Financial Solutions eligibility
- Discounted pricing
- Exclusive marketing materials
- Marketing co-op funds eligibility
- System design support

### Requirements

- Maintain professional business practices
- Deliver high quality system designs and installations
- Possess a proven solar track record
- Actively promote SolarWorld as primary brand
- Maintain minimum annual sales of 300 kW
- Include SolarWorld logo on website

3

Interview with  
SolarWorld account  
manager

4

Pass design and  
installation audits

5

Get accepted into  
Authorized Program

6

Apply for SolarWorld  
Financial Services

America's largest solar manufacturer since 1975



Vertically integrated manufacturing in the United States for over 35 years

