

SOLAR MODULES

We offer solar modules from leading manufacturers in the industry, allowing us to provide the range of sizes and output watts to meet the needs of any user applications. All rigid modules are made with anodized aluminum frames to withstand the most extreme environmental conditions. All modules listed here are designed to charge storage batteries with the use of a charge controller to prevent overcharging, for direct operation of DC loads such as water pumps and fans, as well as for grid-tie application. We do not stock so-called self-regulating modules.

Our best prices per watt are on the higher output modules. The present trend in Canada, and worldwide as well, is for solar arrays consisting of high output modules mounted on tracking support structures. This combination allows the user a 40% increase in average yearly power output.

Medium and small modules are ideal for low power communications, telemetry, agriculture and construction equipment battery charging and maintenance. Most are made like the larger modules with aluminum frames and junction boxes.

Enerwatt Solar Modules

High-performance industrial construction Enerwatt solar modules, using the latest Silicon Nitrate technology in either monocrystalline (M) or polycrystalline (P) cells. These panels use corrosion and torsion-resistant anodized aluminum industrial frames to resist our climatic extremes. All these new features make the Enerwatt solar modules your number one choice for all your home, recreational or industrial projects. And they are warranted up to 30 years according to model.

Module Model	Watts	Peak Amps	Peak Volts	Dimensions H"xW"xD"	Wt. Lbs.	Item Code	Price
EWS-50M	50	2.9	17.3	39.0x17.3x1.3	11.7	11-221	\$ 119
EWS-90M	90	5.1	18.0	47.1x21x1.4	17.6	11-223	\$ 198
EWS-150P	150	8.3	18.1	56.8x26.2x1.4	26.4	11-224	\$ 297
EWS-195M	195	10.7	18.3	62.2x31.8x1.4	33	11-226	\$ 432
EWS-90-CSA	90	5.3	17.2	48.2x21.5x1.5	19.8	11-231	\$ 254



EWS-85M

Trina Solar

Trina Solar produces a wide variety of PV modules ideally suited for all types of installations: residential, commercial, industrial and utility.

Trina Solar modules currently come in two series: MONO, MULTY. They manufacture mono- and multi-crystalline cells in 5" and 6" sizes and their modules are designed with 48, 60 and 72 cells, their modules are certified by established international agencies and carry a 10 year 90% and 25 year 80% production guarantee.

Model	Watts	Peak Amps	Peak Volts	Dimension H"xW"xD"	Item Code	Price
TSM-PA05-240	240	8.10	29.7	65.0x39.1x1.4	11-754	call
TSM-PA05-245	245	8.13	30.2	65.0x39.1x1.4	11-755	call
TSM-PA05-250	250	8.27	30.3	65.0x39.1x1.4	11-756	call



Conergy PH 230P-250P

The Conergy PH 230P-250P solar modules offer a high level of module output at an attractive price/performance ratio. They are equipped with 60 efficient, polycrystalline cells and have proven their worth in practical applications over the years. They are characterised by high yields and a long service life. Their production is certified in accordance with the ISO 9001 international quality standard and meets the high quality standards of Conergy. Thanks to the superb quality of manufacture and standardised dimensions, the Conergy PH 230P-250P can be used for all applications.

Solar modules in the Conergy P-series are also available with monocrystalline and polycrystalline cells in other powerclasses and different module dimensions.

Model	Watts	Peak Amps	Peak Volts	Dimension H"xW"xD"	Item Code	Price
Conergy PE-250P	250	8.35	30.3	65.0x39.1x1.6	11-765	\$317
Conergy PE-260P	260	8.45	30.8	65.0x39.1x1.6	11-767	\$329

SOLAR MODULES

Kyocera Solar Modules

As a pioneer with 35 years in solar, Kyocera demonstrates leadership in the development of solar energy products.

Their advanced cell processing technology and automated production facilities produce a highly efficient, multicrystal photovoltaic module. The conversion efficiency of the Kyocera solar cell at over 16% offers solar panels with a smaller footprint.

Module Model	Watts	Peak Amps	Peak Volts	Dimensions H"xW"xD"	Wt. Lbs.	Item Code	Price*
KC50	50	3.11	17.4	25.2X25.7X2.1	13.9	11-421	\$ n/a
KC85	85	5.02	17.7	39.6X25.7X2.2	17.6	11-422	\$ n/a
KD140SX-UFBS	140	7.91	17.7	59.1X26.3X1.8	35.2	11-423	\$ 554
KD245GX-LFB2	245	8.23	29.8	65.4X39.0X1.8	46.2	11-434	\$ n/a

*min. order of two for all Kyocera modules

Sharp Solar Modules

Sharp modules are designed for a variety of electrical power requirements. The modules have superb durability to withstand rigorous operating conditions. Sharp modules use multi-crystal silicon solar cells except 175 watt module which uses single crystal silicon cells. The modules feature: bypass diodes to minimize power drop caused by shade; a BSF (Back Surface Field) to improve cell conversion efficiency; anodized aluminum frames with pre-drilled mounting holes; 80W and 130W modules have conduit ready J-box..

All Sharp modules come with #14 AWG lead wires with male and female Multi-Contact 3 mm connectors. All modules are listed to UL-1703 and cUL, and carry a 25-year limited warranty.

Sharp Model	Watts	Peak Amps	Peak Volts	Dim H"xW"xD"	Code	Price
ND-250QCS Poly	240	8.40	29.8	64.6x39.1x1.8	11-515	\$ call

Canadian Solar CS6P

CS6P is a robust solar module with 60 solar cells. These modules can be used for on-grid solar applications. Their meticulous design and production techniques ensure a high-yield, long-term performance for every module produced. Their rigorous quality control and in-house testing facilities guarantee Canadian Solar's modules meet the highest quality standards possible.

These modules, like the others on this page, are -even though designed and produced for the on-grid market- well suited for off-grid applications using a MPPT solar charge controller.

Model	Watts	Peak Amps	Peak Volts	Dimensions H"xW"xD"	Item Code	Price
CS6P-250	250	7.90	29.8	64.5x38.7x1.6	11-736	\$ 316
CS6P-255	255	8.03	29.9	64.5x38.7x1.6	11-737	\$ 322
CS6P-260	260	8.17	30.0	64.5x38.7x1.6	11-738	\$ 329
CS6X-305	305	8.41	36.3	76.9x38.7x1.6	11-743	\$ 434



Manufacturers are upgrading and changing their models frequently therefore if you would like to try to match the make and model of your existing array; call and we will quote the best price available. N.A.P.S. is committed to passing savings to our customers.

Quantity discounts available!

SOLAR MODULES

SOLAR MODULES MADE IN USA

SOLARWORLD

SolarWorld's high-performance Sunmodule solar panels have more than 37 years of experience built right in. SolarWorld plus-sorts all Sunmodule solar panels to guarantee that you get the power that you pay for. SolarWorld provides a 35 or 30-year linear performance guarantee and a 10-year product warranty.

Model	Watts	Peak Amps	Peak Volts	Dimension H"xW"xD"	Item Code	Price
PLUS SW 275 mono black	275	9.58	31.0	65.9x39.4x1.3	11-811	call
PLUS SW 280 mono silver	280	9.71	31.2	65.9x39.4x1.3	11-812	call

SUNIVA

Optimus® modules are known for their superior quality and long-term reliability. These high-powered modules consist of Suniva's premium ARTisun® Select cell technology and are designed and manufactured in the U.S.A. using our pioneering ion implantation technology. Suniva's high power-density Optimus modules provide excellent performance and value.

Model	Watts	Peak Amps	Peak Volts	Dimension H"xW"xD"	Item Code	Price
OPT 265-60-4-100	265	8.64	30.7	65.0x38.7x1.6	11-811	call
OPT 270-60-4-100	270	8.68	31.2	65.0x38.7x1.6	11-812	call



SOLAR MODULES MADE IN CANADA

Eclipsall Energy Solar PV Modules

Eclipsall Energy is a Canadian manufacturer of high-performance PV modules. Eclipsall Energy currently offers monocrystalline and polycrystalline PV modules in both 60-cell and 72-cell configurations. Eclipsall offers a positive power tolerance between 0 and +5W maximizing value per watt. Eclipsall NRG modules are available in various frame and backsheet color options. All of Eclipsall's PV modules are UL-certified and meet the domestic content requirements for the Ontario FIT Program.

Eclipsall has taken every measure to ensure that their products are of the highest quality and that they meet or exceed every industry standard of excellence. They have achieved this through the establishment of a state-of-the-art facility, partnerships with best-in-class suppliers and a commitment to the implementation of the strictest quality control practices.

Model	Watts	Peak Amps	Peak Volts	Dimension H"xW"xD"	Item Code	Price
NRG60-245M	245	8.12	30.3	65.5X39.3X1.6	11-831	call
NRG60-250M	250	8.64	30.7	65.5x39.3x1.6	11-811	call
NRG60-260M	260	8.68	31.2	65.5x39.3x1.6	11-812	call

WATTSUN SOLAR TRACKER/MOUNTING STRUCTURES



A Wattsun Tracker will, in most instances, increase an array's total yearly power production by 40% , over fixed position mounting. Compare the cost of a tracker against adding 40% more modules to reach the same level of power production. Keep in mind that more modules require more space, larger and more sturdy mounts to hold them.

The Wattsun tracker uses solid-state electronic sensors to drive a motorized linear actuator which adjusts and maintains the azimuth of the array to directly face the sun at better than 1° of accuracy. During partly cloudy conditions, this tracker fixes on the maximum sun available. At nightfall, it returns to the easterly sunrise position, ready to immediately start tracking when the sun rises.

The NEW DuraTrack DA (dual axis) or AZ (single axis) is built to last of powder-coated steel and anodized aluminum components. A robust gear-driven design makes it stable in the wind. The tracker is meant to be pole mounted, giving you the flexibility to position it lower to the ground to reduce wind loading even further. After more than two decades of use, DuraTrack DA and AZ trackers have been proven to stand up to high winds and harsh environments while providing maximum efficiency.

The DuraTrack DA is available to accommodate 9 or 12 60cell modules. The DuraTrack AZ boasts a high racking capacity of over 4kW per tracker (up to 16 60cell modules and up to 20 72cell, 32"x61" modules)

DuraTrack (former Wattsun) Trackers come with a 10 Year limited warranty.

NEW from Array Technology: DuraRack SP

DuraRack SP is a fix tilt (maually adjustable) single pole module mount accomodating 9 or 12 60cell (39"x65") modules, 12 or 16 32"x61" modules or 9 or 10 39"x77" (~300W 72cell) modules.

The DuraTrack trakers and DuraRack SP top-pole-mounts will be drop-shipped from the factory and are priced FOB Albuquerque, NM. Call for a freight quote.

DuraTrack DA	\$6,975 - 7,275
DuraTrack AZ	\$6,395 - 6,850
DuraRack SP	\$2,795 - 2,945



Trackers do not include mounting pole!

MOUNTING RACKS FOR SOLAR MODULES

Sturdy economical PV module mounting racks are made from heavy gauge anodized aluminum for harsh environments and can be ground or roof mounted. Roof mounts may be ordered with telescoping tube-in-tube legs for quick and easy seasonal tilt adjustment from 15° to 75°. Chromed steel assembly hardware is provided. You must supply appropriate anchor bolts. Mounts can be shipped UPS or Expedited Parcel. *(Small modules are sizes from 30 to 60 watts, Medium modules are sizes from 75 to 130 watts, Large modules are sizes from 160 to 240 watts).*

Call with your PV make, model and count. Actual price subject to quote.

Roof/Ground Mounts - RGM

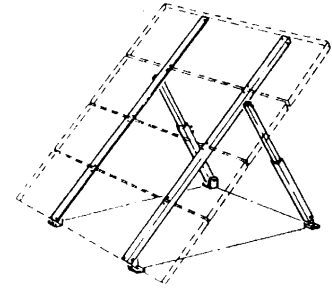
Roof/Ground Mounts are in mill aluminum. Both one-piece (OP) and telescoping-leg (TL) sets are available. Racks come with stainless steel module mounting hardware and Grade 5 zinc-plated rack assembly hardware. Standard mounting feet are made of steel and are hot-dip-galvanized after fabrication. Module rails and legs are made of mill-finish 6061-T6 structural aluminum angle. Some large racks are aluminum channel. Clear anodizing is available as an option. One piece leg (OP) has 3 Set-Points: 30, 45, 60 degrees, telescoping leg (TL) with adjustable tilt range: 20 to 65 degrees.

Specify TPM Rack Model # = **RGM(PV Qty) - (PV Model) - Tilt leg (OP or TL)**



Standard Ground / Roof Mounting Racks (panel orientation: landscape)

12-201	UNI-GR/01 for panels 25" wide	\$ 99
12-202	UNI-GR/02 for panels 45" wide	\$ 174
12-203	UNI-GR/03 for panels 70" wide	\$ 268
12-204	UNI-GR/04 for panels 90" wide	\$ 447



Low Profile Ground / Roof Mounting Racks (panel orientation: portrait)

12-214	UNI-GR/04H for panels 110" wide	\$ 412
12-215	UNI-GR/06H for panels 140" wide	\$ 649
12-215A	UNI-GR/06AH for panels 160" wide	\$
12-216	UNI-GR/08H for panels 180" wide	\$ 824
12-217	UNI-GR/10H for panels 225" wide	\$ 978
12-218	UNI-GR/12H for panels 270" wide	\$1,264
12-219	UNI-GR/14H for panels 325" wide	\$1,489



Standard Ground or Roof Rack

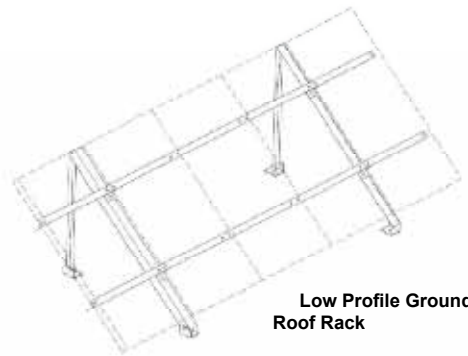
Direct Power & Water

PowerFab Two-Tier Ground Mounts

Direct Power's Two-Tier Ground Mounts are made from 6061-T6 structural aluminum extrusions with a mill finish. Modules are racked in two rows with module length vertical. Models are available to hold from 4 to 10 modules (depending on module width). The two-tier mount is a cost-effective way to create large ground mounted arrays. Multiple two-tier mounts may be installed next to each other in an east-west direction. These mounts may also be used as roof mounts. The mounts listed have adjustable back legs. Mounts for other brands and sizes of modules and mounts with fixed back legs are available. **Please contact us for information and pricing on mounts indicating brand and size of modules.**

Typical pricing for TTRGM item no. 12-300-brand-model-no. of panels:

TTRGM for 6 21"x47" panels (75-85W)	\$ ask
TTRGM for 8 21"x47" panels (75-85W)	\$ ask
TTRGM for 10 21"x47" panels (75-85W)	\$ ask
TTRGM for 6 62"x33" panels (175/180W)	\$ ask
TTRGM for 8 62"x33" panels (175/180W)	\$ ask
TTRGM for 10 62"x33" panels (175/180W)	\$ ask



Low Profile Ground / Roof Rack



MOUNTING RACKS FOR SOLAR MODULES

Side-of-Pole Mounts

UniRac mounting structures incorporate Solar Mount slotted rails that fit most PV modules on the market and are manufactured of clear anodized (rails and legs) aluminum to withstand corrosion.

Features include:

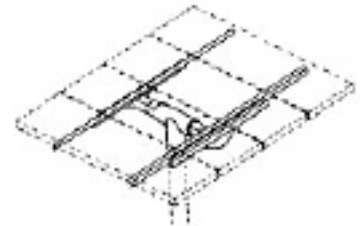
“ 120 mph wind load design “ PV module mounting hardware and U-Bolts for pole mounting are included “ Stainless steel hardware “ 1-year limited warranty “ Adjustable tilt 15 to 60 degrees “ Models mount 1-4 PV modules



12-401	UNI-SP/01 with 25" rails	\$142
12-402	UNI-SP/01A with 27" rails	\$249
12-403	UNI-SP/02 with 45" rails	\$310
12-404	UNI-SP/02X with 55" rails	\$399
12-405	UNI-SP/03 with 70" rails	\$535

Small Top of Pole Mounts

Universal mounts designed using numerically controlled precision machinery, for a precise and efficient installation. Surpassing recommended norms, they easily support snow, ice and even winds of up to 210 km/h (126 mph), made of milled aluminium, with stainless steel hardware included.



12-501	UNI-TP/02 for panels up to 45" wide	\$ 449
12-502	UNI-TP/03 for panels up to 70" wide	\$ 514
12-503	UNI-TP/04 for panels up to 90" wide	\$ 599
12-510	UNI-TP/06 for panels up to 70" wide - 2 rows	\$1,379
12-511	UNI-TP/08 for panels up to 90" wide - 2 rows	\$1,478
12-512	UNI-TP/10 for panels up to 115" wide - 2 rows	\$1,674
12-513	UNI-TP/12 for panels up to 140" wide - 2 rows	\$2,179
12-515	UNI-TP/06LL for 4 32"x62" panels	\$1,435
12-516	UNI-TP/08LL for 4 39"x66" panels	\$1,538
12-517	UNI-TP/10LL for 6 32"x62" panels	\$2,056
12-518	UNI-TP/12LL for 8 32"x62" or 6 39"x66" panels	\$2,239

Direct Power & Water

PowerFab Top Pole Mounts (TPM)

PowerFab TPM standard mounts have heavy steel mounting sleeves, elevation pivots and strongbacks that are painted with durable outdoor paint. The module rails are 6061-T6 mill-finish structural aluminum angle. Stainless steel module mounting hardware is provided. Standard top-of-pole mounts are adjustable from 15 degrees to 65 degrees in 10-degree increments and fit on schedule-40 steel pipe. These high quality mounts are custom made for any module configuration - so **call for a quote specifying the make, size and no. of solar panels intended to use.**

