

420-445 Watts
17%+ Efficiency

HIGH-POWER PV MODULES

First Solar Series 6™ photovoltaic (PV) module sets a new industry benchmark for reliable energy production, optimized design and environmental performance. Series 6 modules are optimized for every stage of your application, significantly reducing balance of system, shipping, and operating costs.



MORE ENERGY PER MODULE

- More watts per connection and per lift (420+ watts) than 72-cell silicon modules
- With superior temperature coefficient, spectral response and shading behavior, Series 6 modules generate up to 8% more energy per watt than conventional crystalline silicon solar modules
- Anti-reflective coated glass enhances energy production



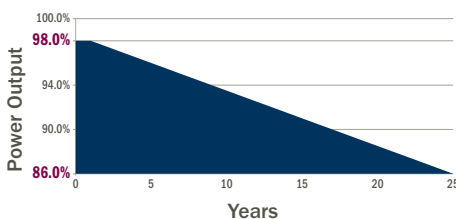
INNOVATIVE MODULE DESIGN

- Under-mount frame allows for simple and fast installation
- SpeedSlots™ combine the robustness of bottom mounting with the speed of top clamping while utilizing fewer fasteners
- Dual junction box optimizes module-to-module connections
- Under-mount frame provides the cleaning and snow-shedding benefits of a frameless module, protects edges against breakage and enables horizontal stacking

INDUSTRY-LEADING MODULE WARRANTY¹

98.0% WARRANTY START POINT

0.5% WARRANTED ANNUAL DEGRADATION RATE



- 25-Year Linear Performance Warranty
- 10-Year Limited Product Warranty



PROVEN LONG-TERM RELIABILITY

- Manufactured using methods and process adapted from Series 4 modules – the most tested solar modules in the industry
- Independently tested and certified for reliable performance that exceeds IEC standards in high temperature, high humidity, extreme desert and coastal applications



BEST ENVIRONMENTAL PROFILE

- Fastest energy payback time and smallest carbon and water footprint in the industry
- Global PV collection and recycling services available through First Solar or customer-selected third-party

FIRST SOLAR SERIES 6™

MODEL TYPES AND RATINGS AT STANDARD TEST CONDITIONS (1000W/m², AM 1.5, 25°C)²

NOMINAL VALUES		FS-6420 FS-6420A	FS-6425 FS-6425A	FS-6430 FS-6430A	FS-6435 FS-6435A	FS-6440 FS-6440A	FS-6445 FS-6445A
Nominal Power ³ (-0/+5%)	P _{MAX} (W)	420.0	425.0	430.0	435.0	440.0	445.0
Efficiency (%)	%	17.0	17.2	17.4	17.6	17.8	18.0
Voltage at P _{MAX}	V _{MAX} (V)	180.4	181.5	182.6	183.6	184.7	185.7
Current at P _{MAX}	I _{MAX} (A)	2.33	2.34	2.36	2.37	2.38	2.40
Open Circuit Voltage	V _{OC} (V)	218.5	218.9	219.2	219.6	220.0	220.4
Short Circuit Current	I _{SC} (A)	2.54	2.54	2.54	2.55	2.55	2.56
Maximum System Voltage	V _{SYS} (V)	1500 ⁵					
Limiting Reverse Current	I _R (A)	6.0					
Maximum Series Fuse	I _{CF} (A)	6.0					

RATINGS AT NOMINAL OPERATING CELL TEMPERATURE OF 45°C (800W/m², 20°C air temperature, AM 1.5, 1m/s wind speed)²

Nominal Power	P _{MAX} (W)	317.2	320.9	324.7	328.5	332.4	336.0
Voltage at P _{MAX}	V _{MAX} (V)	168.7	169.8	170.9	172.0	173.1	174.1
Current at P _{MAX}	I _{MAX} (A)	1.88	1.89	1.90	1.91	1.92	1.93
Open Circuit Voltage	V _{OC} (V)	206.3	206.6	207.0	207.3	207.7	208.0
Short Circuit Current	I _{SC} (A)	2.04	2.05	2.05	2.06	2.06	2.06

TEMPERATURE CHARACTERISTICS

Module Operating Temperature Range	(°C)	-40 to +85					
Temperature Coefficient of P _{MAX}	T _K (P _{MAX})	-0.32%/°C [Temperature Range: 25°C to 75°C]					
Temperature Coefficient of V _{OC}	T _K (V _{OC})	-0.28%/°C					
Temperature Coefficient of I _{SC}	T _K (I _{SC})	+0.04%/°C					

MECHANICAL DESCRIPTION

Length	2009mm
Width	1232mm
Thickness	49mm
Area	2.47m ²
Module Weight	36kg
Leadwire ⁶	2.5mm ² , 720mm (+) & Bulkhead (-)
Connectors	MC4-EVO 2
Bypass Diode	N/A
Cell Type	Thin film CdTe semiconductor, up to 264 cells
Frame Material	Anodized Aluminum
Front Glass	2.8mm heat strengthened Series 6A™ includes anti-reflective coating
Back Glass	2.2mm heat strengthened
Encapsulation	Laminate material with edge seal
Frame to Glass Adhesive	Silicone
Load Rating ⁷	2400Pa

PACKAGING INFORMATION

Modules Per Pallet	26	Pallet Dimensions (L x W x H)	2200 x 1300 x 1150mm (86 x 51 x 45in)
Pallet Weight	1051kg	Pallets per 40' Container	18

CERTIFICATIONS AND TESTS

IEC

61215 & 61730 1500V⁵, CE
61701 Salt Mist Corrosion
60068-2-68 Dust and Sand
Resistance

UL

UL 1703 1500V Listed⁵

REGIONAL CERTIFICATIONS

CSI Eligible JET⁴
MCS SII
InMetro⁴

EXTENDED DURABILITY TESTS

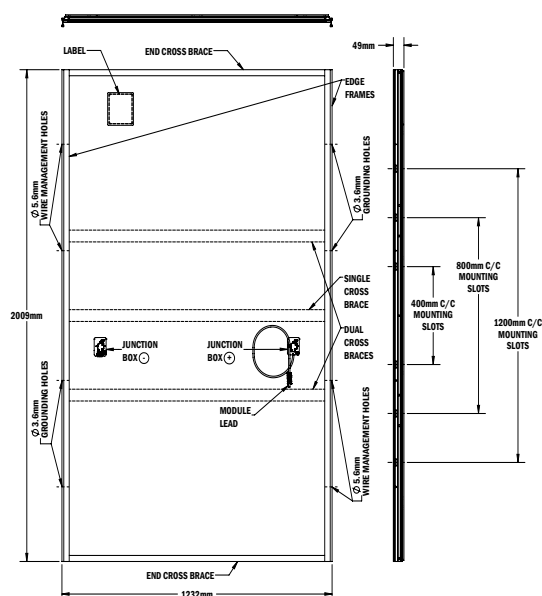
ANSI/CAN/CSA-C450-18
Long-Term Sequential
Thresher Test
PID Resistant

QUALITY & EHS

ISO 9001:2015 & 14001:2015
OHSAS 18001:2007
ISO 45001:2018



MECHANICAL DRAWING



Install in portrait only

- Limited power output and product warranties subject to warranty terms and conditions
- All ratings ±10%, unless specified otherwise. Specifications are subject to change
- Measurement uncertainty applies
- Testing Certifications/Listings pending
- IEC 61730-1: 2016 Class II | ULC 1703 1000V listed
- Leadwire length from junction box exit to connector mating surface
- Higher load ratings can be met with additional support, subject to testing