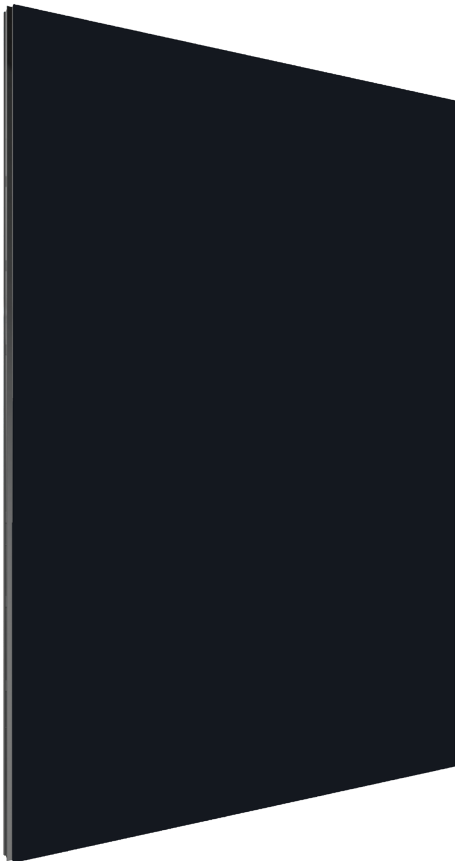




Series 6 Plus Bifacial.

420-450 Watt Thin Film Solar Module

First Solar is once again setting the industry benchmark for reliable energy production, optimized design and environmental performance with Series 6 Plus Bifacial - the world's first bifacial thin film CdTe module. The advanced design significantly reduces balance of system, shipping, and operating costs while delivering more energy per nameplate watt.



More Lifetime Energy per Nameplate Watt

- Superior temperature coefficient, spectral, and shading response
- No power loss from LID or LeTID
- Anti-reflective coated glass enhances energy production
- Added bifacial energy yield



Innovative Module Design

- Under-mount frame provides the cleaning and snowshedding benefits of a frameless module while protecting edges against breakage
- Innovative SpeedSlot mounting feature delivers the industry's fastest installation times and lowest mounting hardware costs
- Dual junction box design reduces wire management complexity and cost



Unmatched Quality and Durability

- End-to-end manufacturing process for globally consistent quality
- Tested and certified to IEC standards and beyond
- Durable glass/glass construction
- Immune to and warranted against power loss from cell cracking
- 30-year Linear Performance Warranty
- 12-year Limited Product Warranty



Industry's Most Eco-efficient PV Solution

- Industry leading carbon footprint, water footprint and energy payback time
- Globally available PV module recycling services

17.9%

HIGH BIN EFFICIENCY

30YR

LINEAR PERFORMANCE WARRANTY

98%

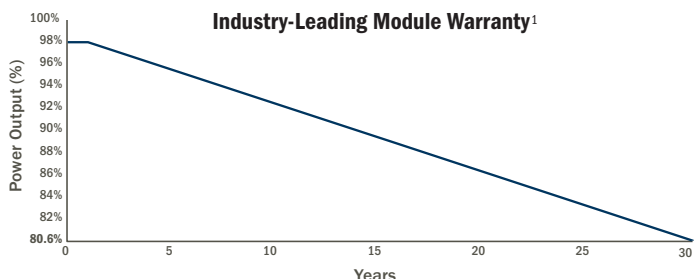
WARRANTY START POINT

0.6%

WARRANTED ANNUAL DEGRADATION RATE



Learn more about First Solar and Series 6 Plus Bifacial at firstsolar.com/S6



Series 6 Plus Bifacial.



Electrical Specifications

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

SERIES 6 PLUS BIFACIAL MODEL TYPES: FS-6XXX-P-B / FS-6XXXA-P-B (XXX = NOMINAL POWER)

| Nominal Power ³ (-0/+5%) | P _{MAX} (W) | 420 | | 425 | | 430 | | 435 | | 440 | | 445 | | 450 | |
|--|----------------------|-------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | STC ⁴ | BNPI ⁵ | STC | BNPI | STC | BNPI | STC | BNPI | STC | BNPI | STC | BNPI | STC | BNPI |
| Nominal Power | P _{MAX} (W) | 420 | 429 | 425 | 434 | 430 | 439 | 435 | 444 | 440 | 449 | 445 | 454 | 450 | 459 |
| Voltage at P _{MAX} | V _{MAX} (V) | 180.4 | 180.4 | 181.5 | 181.5 | 182.6 | 182.6 | 183.6 | 183.6 | 184.7 | 184.7 | 185.7 | 185.7 | 186.8 | 186.8 |
| Current at P _{MAX} | I _{MAX} (A) | 2.33 | 2.37 | 2.34 | 2.39 | 2.36 | 2.40 | 2.37 | 2.42 | 2.38 | 2.43 | 2.40 | 2.45 | 2.41 | 2.46 |
| Open Circuit Voltage | V _{OC} (V) | 218.5 | 218.5 | 218.9 | 218.9 | 219.2 | 219.2 | 219.6 | 219.6 | 220.0 | 220.0 | 220.4 | 220.4 | 221.1 | 221.1 |
| Short Circuit Current | I _{SC} (A) | 2.54 | 2.59 | 2.54 | 2.59 | 2.54 | 2.59 | 2.55 | 2.60 | 2.55 | 2.60 | 2.56 | 2.61 | 2.57 | 2.62 |
| Efficiency (%) | % | 16.7 | | 16.9 | | 17.1 | | 17.3 | | 17.5 | | 17.7 | | 17.9 | |
| Maximum System Voltage | V _{SYS} (V) | 1500 ⁶ | | | | | | | | | | | | | |
| Limiting Reverse Current | I _R (A) | 5.0 | | | | | | | | | | | | | |
| Maximum Series Fuse | I _{CF} (A) | 5.0 | | | | | | | | | | | | | |

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 |
| Nominal Operating Cell Temperature | °C | 43 |
| Bifaciality Factor | % | 15±5 |

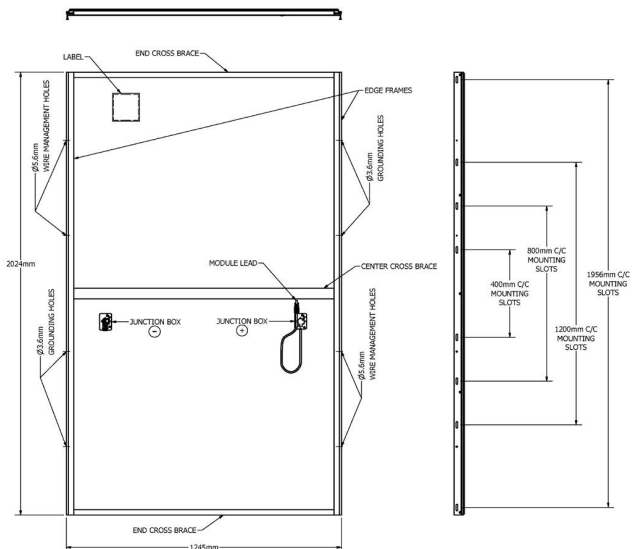
PACKAGING INFORMATION

| Model Type | Modules Per Pack | Packs per 40' Container |
|----------------------------|------------------|-------------------------|
| FS-6XXX-P-B / FS-6XXXA-P-B | 27 | 18 |

MECHANICAL DESCRIPTION

| | |
|--------------------------|---|
| Module/Glass Length | 2024mm/2016mm |
| Module/Glass Width | 1245mm/1216mm |
| Module/Glass Area | 2.52m ² /2.45m ² |
| Module Weight | 34.0kg |
| Leadwire ⁷ | 2.5mm ² , 733mm (+) & Bulkhead (-) |
| Connectors | TE Connectivity PV4-S, or alternate |
| Junction Box | IP68 Rated |
| Bypass Diode | N/A |
| Cell Type | Thin film CdTe semiconductor, up to 268 cells |
| Frame Material | Anodized Aluminum |
| Front Glass | Heat strengthened |
| Back Glass | Heat strengthened |
| Encapsulation | Laminate material with edge seal |
| Frame to Glass Adhesive | Silicone |
| Load Rating ⁸ | +/-2400Pa |

Mechanical Specifications



Certifications & Tests⁹

| CERTIFICATIONS AND LISTINGS | EXTENDED DURABILITY TESTS | QUALITY & EHS |
|---|---|--|
| IEC 61215:2021 & 61730-1:2016 ⁶ , CE IEC 61701 Salt Mist Corrosion IEC 60068-2-68 Dust and Sand Resistance UL 61730 | IEC TS 63209-1 Extended Stress Test Long-Term Sequential Thresher Test PID Resistant | ISO 9001:2015 ISO 14001:2015 ISO 45001:2018 ISO 14064-3:2006 EPEAT Silver Registered |

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
- Frontside electrical ratings
- Bifacial Name Plate Irradiance, as per IEC 61215:2021
- IEC 61730-1: 2016 Class II
- Leadwire length from junction box exit to connector mating surface
- 1500Pa tentative load rating for 1956mm mounting slots. Higher loads may be acceptable, subject to testing
- Testing Certifications/Listings pending



Disclaimer

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