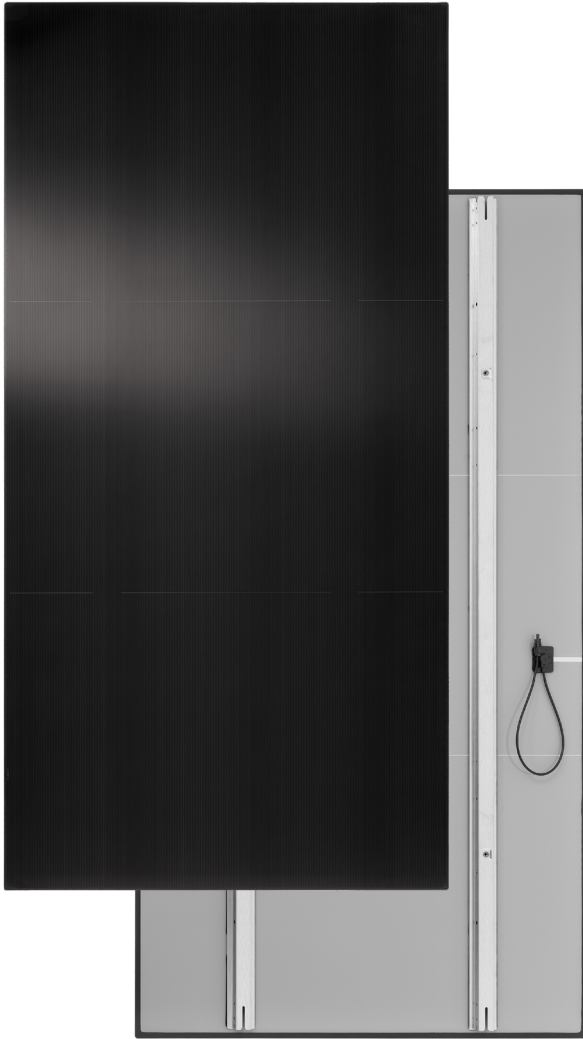




# Series 7 FT1.

## 505-550 Watt Thin Film Solar Module

Series 7 FT1 modules combine First Solar's thin film technology with a larger form factor and an innovative new back rail mounting system to deliver improved efficiency and unmatched lifetime energy performance for utility-scale PV projects.



### More Lifetime Energy per Nameplate Watt

- Industry's best (0.3%) warranted degradation rate
- Superior temperature coefficient, spectral and shading response
- No power loss from LID or LeTID
- Anti-reflective coated glass enhances energy production



### Innovative Module Design

- Optimized back rail mount design enhances installation velocity
- Frameless design improves soiling performance
- Dual junction box design reduces wire management complexity and cost



### Unmatched Quality and Reliability

- 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
- 10-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



### Domestically Manufactured

- Manufactured in India, for the Indian market
- ALMM enlisted, DRC eligible, and BIS compliant

**19.7%**  
HIGH BIN EFFICIENCY

**25YR**  
LINEAR PERFORMANCE  
WARRANTY

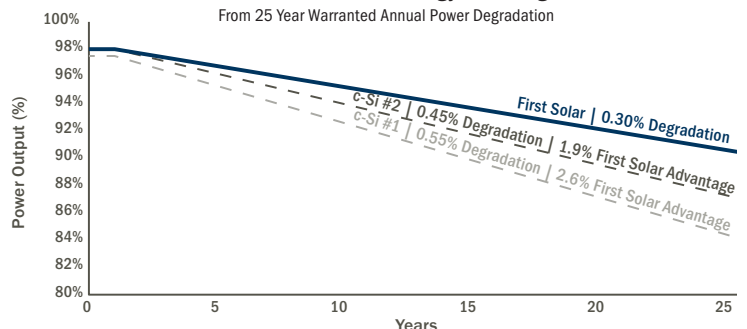
**98%**  
WARRANTY START POINT

**0.3%**  
WARRANTED ANNUAL  
DEGRADATION RATE



Learn more about First Solar  
and Series 7 FT1  
at [firstsolar.com/S7](https://firstsolar.com/S7)

**First Solar Lifetime Energy Advantage**  
From 25 Year Warranted Annual Power Degradation



# Series 7 FT1.

## Electrical Specifications



LEADING THE WORLD'S  
SUSTAINABLE ENERGY FUTURE

**MODEL TYPES: FS-7XXXA-FT1** (XXX = NOMINAL POWER)  
**RATINGS AT STANDARD TEST CONDITIONS** (1000W/m<sup>2</sup>, AM 1.5, 25°C)<sup>2</sup>

Nominal Power <sup>3</sup> (-0/+5%)	P <sub>MAX</sub> (W)	505	510	515	520	525	532	535	540	545	550
Efficiency (%)	%	18.1	18.3	18.4	18.6	18.8	19.0	19.1	19.3	19.5	19.7
Cell Efficiency (%)	%	18.9	19.1	19.3	19.5	19.7	20.0	20.1	20.3	20.4	20.6
Voltage at P <sub>MAX</sub>	V <sub>MAX</sub> (V)	182.5	183.4	184.3	185.2	186.0	187.3	187.8	188.7	189.6	190.4
Current at P <sub>MAX</sub>	I <sub>MAX</sub> (A)	2.77	2.78	2.80	2.81	2.82	2.84	2.85	2.86	2.88	2.89
Open Circuit Voltage	V <sub>OC</sub> (V)	223.9	224.5	225.0	225.6	226.1	226.9	227.2	227.7	228.2	228.8
Short Circuit Current	I <sub>SC</sub> (A)	3.01	3.02	3.03	3.04	3.04	3.05	3.06	3.06	3.07	3.08
Maximum System Voltage	V <sub>SYS</sub> (V)	1500 <sup>5</sup>									
Limiting Reverse Current	I <sub>R</sub> (A)	5.0									
Maximum Series Fuse	I <sub>CF</sub> (A)	5.0									

### TEMPERATURE CHARACTERISTICS

Module Operating Temperature Range	(°C)	-40 to +85
Temperature Coefficient of P <sub>MAX</sub>	T <sub>K</sub> (P <sub>MAX</sub> )	-0.32%/°C [Temperature Range: 25°C to 75°C]
Temperature Coefficient of V <sub>OC</sub>	T <sub>K</sub> (V <sub>OC</sub> )	-0.28%/°C
Temperature Coefficient of I <sub>SC</sub>	T <sub>K</sub> (I <sub>SC</sub> )	+0.04%/°C
Nominal Operating Cell Temperature	(°C)	45

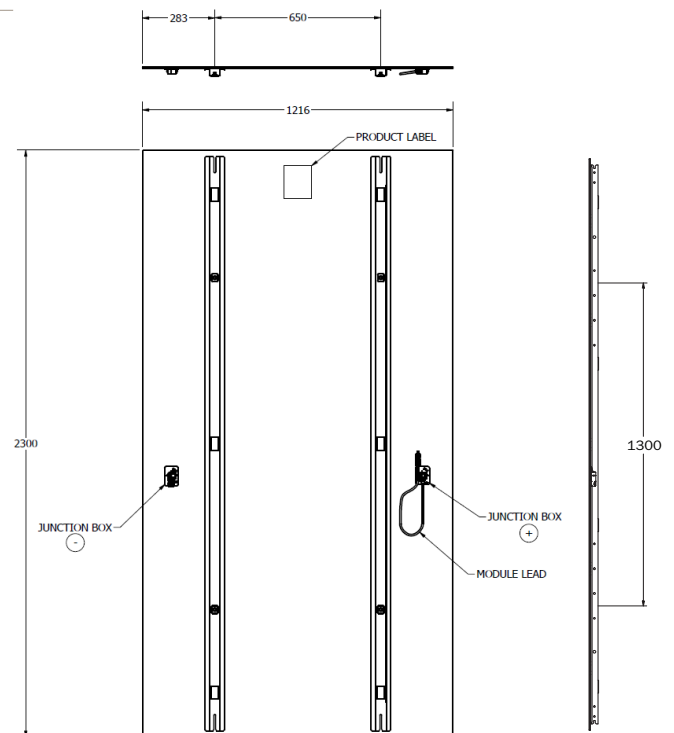
### PACKAGING INFORMATION

Model Type	Modules Per Pack	Packs per 12m Container
FS-7XXXA-FT1	48	10

### MECHANICAL DESCRIPTION

Length	2300mm
Width	1216mm
Area	2.80m <sup>2</sup>
Module Weight	36.8kg
Leadwire <sup>6</sup>	2.5mm <sup>2</sup> , 500mm (+) & 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
Back Rail Material	Galvanized steel
Front Glass	Heat strengthened
Back Glass	Heat strengthened
Encapsulation	Laminate material with edge seal
Frame to Glass Adhesive	Silicone
Load Rating	2400Pa

### Mechanical Specifications



## Certifications & Tests<sup>4</sup>

### CERTIFICATIONS AND LISTINGS

IEC 61215:2016 & 61730-1:2016,CE  
IEC 61701 Salt Mist Corrosion  
IEC 60068-2-68 Dust and Sand Resistance  
IEC 62716 Ammonia Corrosion  
UL 61730 1500V Listed  
BIS

### EXTENDED DURABILITY TESTS

IEC TS 63209-1 Extended Stress Test  
Long-Term Sequential  
Thresher Test  
PID Resistant

### QUALITY & EHS

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
- Testing Certifications/Listings pending
- IEC 61730-1: 2016 Class II
- Leadwire length from junction box exit to connector mating surface



#### Disclaimer

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