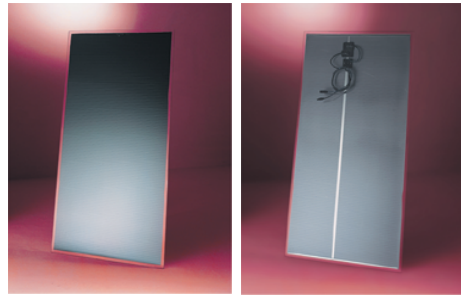




FS-SERIES Solar Modules

Leading
Thin Film
Photovoltaic
Technology



First Solar introduces the FS Series solar module products – a product platform designed to cost effectively address a multitude of on-grid and off-grid applications.

FS Series Laminate Modules

Laminates are able to be easily integrated into many different solar system designs and are ideal for many OEM applications.

• FS45 • FS50 • FS55

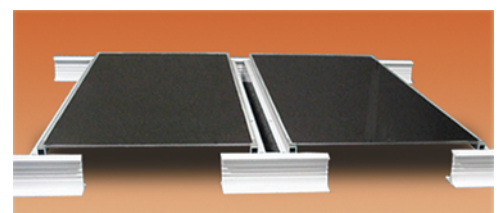
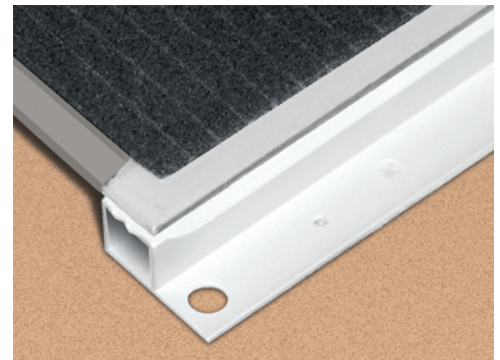
FS Series Modules with Universal Mounting Rails

Mounting rails are attached to FS Series modules to provide quick and easy module mounting on racks, commercial structures, or the First Solar EZ Mount system for non-penetrable building rooftop applications.

• FS45D • FS50D • FS55D

Key Features:

- Stable power output warranted for 20 years
- Low Temperature Coefficients provide more power at actual operating conditions
- Proven module durability eliminates delamination in the field and the need for expensive frames
- Optional aluminum mounting rail available for cost-efficient installation
- UL 1703 Listed for electrical and fire safety (class C fire rating)
- Certified to IEC 61646
- Available as a UL Recognized frameless glass laminate
- Architecturally aesthetic uniform black appearance
- Weatherproof connector and cordplate eliminate the need for a junction box and module-to-module field wiring
- Heat strengthened 3.2mm glass superstrate laminated to 3mm tempered back glass
- Available bundled with First Solar's EZ-Mount PV flat roof deployment system for large grid tied systems or with an economical maximum-power-point tracking battery charge controller for remote applications.



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Electrical Specifications (+/- 10%)

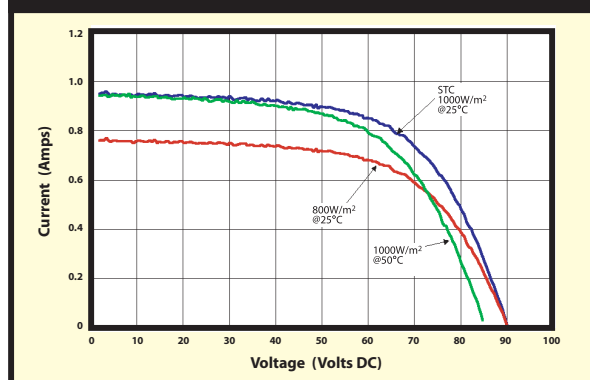
Nominal Values		FS-45	FS-50	FS-55
Power, Peak	Pmax	46 W	52 W	57 W
Voltage at Pmax	Vmp	60 V	63 V	65 V
Current at Pmax	Imp	.75 A	.80 A	.84 A
Open Circuit Voltage	Voc	87 V	88 V	90 V
Short Circuit Voltage	Isc	.90 A	.95 A	1.0 A
Series Fuse Rating		2 A		
Normal Operating Cell Temp	NOCT	45°C		
Maximum System Voltage	Volts	600 VDC		
Temperature Coefficient of Pmax	TK (Pmax)	-0.20% /°C		
Temperature Coefficient of Voc	Tk (Voc)	-0.22% /°C		
Temperature Coefficient of Isc	Tk (Isc)	-0.02% /°C		



IEC 61646 Certified

* Electrical data is taken at Standard Test Conditions (STC): Irradiance of 1000W/m² with spectrum AM1.5 and a cell temperature of 25°C

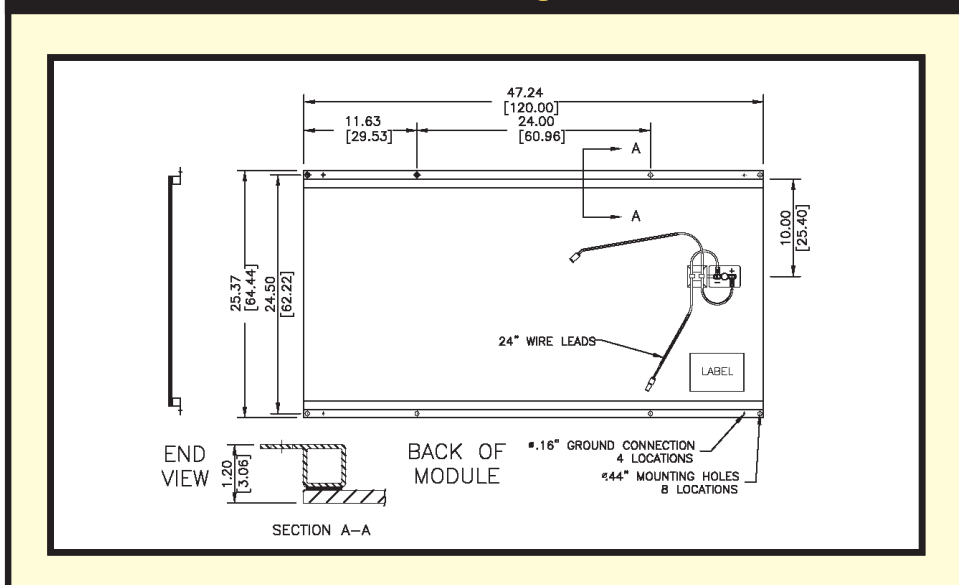
Illuminated I-V Curve



Mechanical Specifications

	Laminate		With Rail	
	inches	cm	inches	cm
Length	47.25	120.00	47.25	120.00
Width	23.63	60.00	25.37	64.40
Thickness	0.25	0.60	1.20	3.00
Area	ft²	m²	ft²	m²
	7.75	0.72	7.75	0.72
Weight	lbs	kg	lbs	kg
	25	11.40	27	12.25

Mechanical Drawing (with Rail)



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Specifications subject to change without notice.