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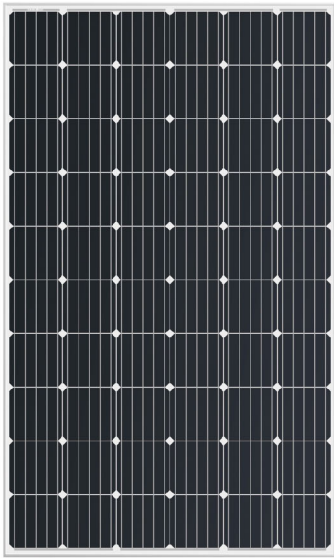
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Solar Panel Guide Specification Data Sheet

**Ningbo Fullstar Solaris Co., Ltd.
FSMA5 60 Cell (5BB)
FS-290M-Da**

Also available on the web at
EnergyPal.com/ningbo-fullstar-solaris-co-ltd-solar-panels/fs-290m-da



FSMA5 60 Cell (5BB)



Excellent module power up to 300W



Excellent energy generation in weak light



Stable performance due to the IP67 waterproof junction box



0~+3% power output



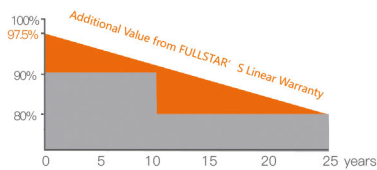
PID free module
Anti-PID material
Anti-PID cell technology



Wind load of up to 2400 Pa and heavy snow load of up to 5400 Pa

Certificate

- ◆ ISO 9001 Quality management system certificate and ISO 14001 Environmental management system certificate
- ◆ OHSAS 18001 International standards for occupational health and safety
- ◆ IEC 61215 and IEC 61730 A level certification



Additional value from Fullstar linear warranty lower annual power attenuation and higher reliability
>First year power attenuation 2.5% and annual power attenuation of 0.5% afterwards
>Over 80% power output warranty for 25 years

Engineering Drawing

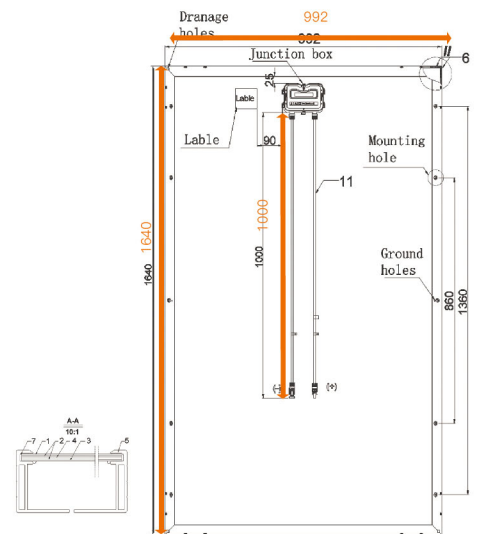
Item	FS-275M-Da	FS-280M-Da	FS-285M-Da	FS-290M-Da	FS-295M-Da	FS-300M-Da
Max. Power (Pmax)	275W	280W	285W	290W	295W	300W
Opt. Operating Current (Imp)	8.84A	8.91A	8.97A	9.07A	9.19A	9.32A
Opt. Operating Voltage (Vmp)	31.11V	31.43V	31.78V	31.98V	32.11V	32.20V
Short Circuit Current (Isc)	9.21A	9.32A	9.43A	9.53A	9.65A	9.71A
Open Circuit Voltage (Voc)	39.04V	39.22V	39.40V	39.58V	39.76V	39.53V
Module Efficiency	16.90%	17.20%	17.50%	17.80%	18.10%	18.40%
Module Power Tolerance	0/+3%					
Operating Temperature	-40°C~+85°C					
Max. System Voltage	1000VDC(IEC)					
Max. Nominal Fuse Current	15A					
Application Level	A					
STC	Irradiance 1000W/m ² , Module temperature 25°C, AM1.5					
NOCT	Irradiance 800W/m ² , Module temperature 20°C, AM1.5, Wind speed 1m/s					

Temperature characteristics	
Nominal Operating Cell Temperature	45±2°C
Temperature Coefficient (Pmax)	-0.410%/°C
Temperature Coefficient (Voc)	-0.340%/°C
Temperature Coefficient (Isc)	+0.049%/°C

Mechanical Data	
CELL TYPE	156.75×156.75mm Monocrystalline
Cell Arrangement	60 (6×10)
Dimensions	1640×992×35mm
Weight	18kg
Front Cover	3.2mm tempered glass
Frame Material	Anodized aluminium alloy
J-Box	IP67, 3 diodes
Cable	TUV(2Pfg1169:2007)
Connector	4.0m m ² (0.006inches ²), (-)1000mm(39.4inches) and (+)1000mm(39.4inches) MC4适配

Packaging specification		
Container	20° GP	40° HC
Module quantity per pallet	26	26
Pallet quantity per container	12	28
Module quantity per container	312	728

Performance under low irradiation
Industry-leading performance under low irradiance conditions. The module efficiency of irradiance 200W/m² is above 96.5% of the irradiance 1000W/m² module efficiency



I-V Curves Of aPV Module

