

FLEX SOLAR MODULES

60-Cell PERC Mono: 290 W

Experience, capability and execution

Flex is the Sketch-to-Scale™ solutions provider that designs and builds intelligent products for a connected world. Established in 1969, Flex is a fortune 500 company with over 200,000 professionals working across 12 industries and 100 locations in 30 countries. Flex provides innovative design, engineering, manufacturing, real-time supply chain insight and logistics services to companies of all sizes – including many of the world’s largest brands.

Flex has delivered over 8 million solar modules to customers around the world - with in-depth experience and history designing and manufacturing products for top tier solar, inverter and energy technology companies. Flex solar modules are produced to the highest standards of excellence and performance, reflecting the company’s outstanding manufacturing, design and global supply chain capabilities; execution that meets the most stringent designs, standards and technologies globally.

Safety

- » TÜV Certified to IEC 61730

Performance Tested

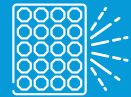
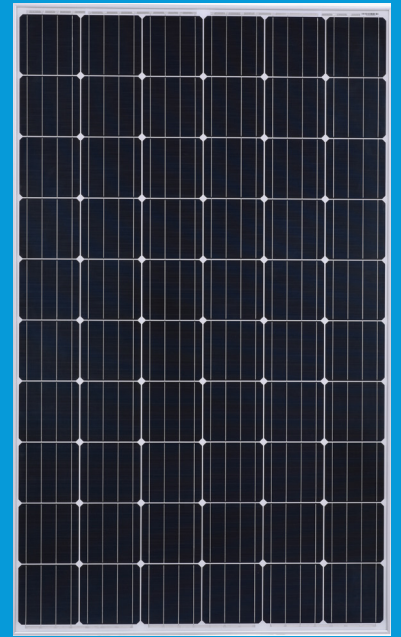
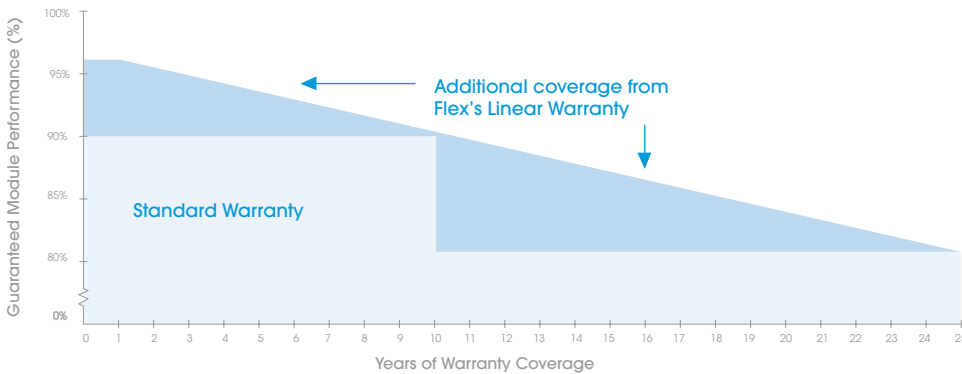
- » IEC 61215 long-term operations in a variety of climates including snow loading up to 5400 Pa and hail testing
- » Low glare anti-reflective coated (ARC) tempered glass
- » Outstanding performance in low-light irradiance environment
- » Power tolerances +5 W
- » Support 1000 V system voltage
- » 4 Bus Bar configuration

Quality

- » Manufactured under Flex’s renowned Quality Management System of Excellence; factories are ISO 9001 and 14001 certified
- » Manufactured to AQL 0.4 Level II quality and tested up to 3x beyond IEC standards
- » 100% final inspection of modules

Warranty

- » 10-year warranty for materials and workmanship
- » 25-year linear power warranty at STC:
 - Year 1: ≤ 3.0% of rated power
 - After year 1: ≤ 0.7% rated power degradation per year



PERC high-efficiency technology

Light is captured by both the front and rear of the cell which maximises the power output per m²



Extreme weather tested

Certified against wind and snow loading up to 5400 Pa



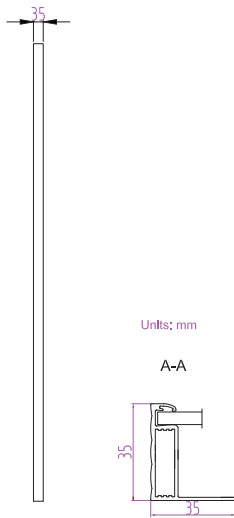
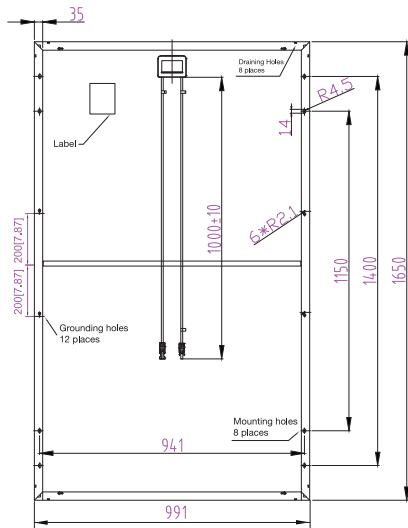
Extended warranty for coastal areas

Leading warranty covering all coastal areas



PID free

Free from the risk of Performance Induced Degradation that affects the long term output of solar panels



Units: mm

A-A

MECHANICAL PARAMETERS

Cell (mm)	Almost Full Square Mono 156.75 x 156.75
Weight (kg)	18.0 (approx)
Dimensions (LxWxH) (mm)	1650 x 991 x 35
Cable Cross Section Size (mm ²)	4
No. of Cells and Connections	60 (6 x 10)
Junction Box	IP67, 3 diodes
Connector	Multi-Contact MC4PV-KBT4/PV-KST4 (4 mm ²)
Packaging Configuration	30 Per Pallet

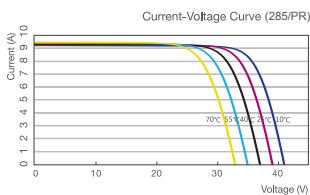
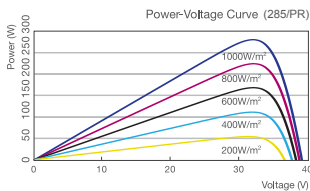
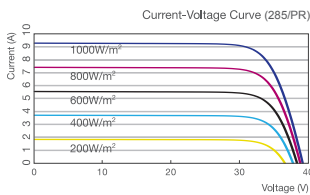
WORKING CONDITIONS

Maximum System Voltage	DC 1000 V (IEC)
Operating Temperature	-40°C~+85°C
Maximum Series Fuse	15 A
Maximum Static Load, Front	5400 Pa
Maximum Static Load, Back	2400 Pa
NOCT	45±2°
Application Class	Class A

ELECTRICAL PARAMETERS

Rated Maximum Power at STC (W)	290
Open Circuit Voltage (Voc/V)	39.46
Maximum Power Voltage (Vmp/V)	31.80
Short Circuit Current (Isc/A)	9.57
Maximum Power Current (Imp/A)	9.12
Module Efficiency (%)	17.74
Power Tolerance (W)	-0~+5 W
Temperature Coefficient of Isc (alsc)	+0.060%/°C
Temperature Coefficient of Voe (βVoc)	-0.300%/°C
Temperature Coefficient of Pmax (γPmp)	-0.390%/°C
STC	Irradiance 1000W/m ² , Cell Temperature 25°C, Air Mass 1.5

I-V CURVE



ELECTRICAL DATA (NOCT)

Type	290
Max Power (Pmax) (W)	212.02
Open Circuit Voltage (Voc) (V)	36.24
Max Power Voltage (Vmp) (V)	28.81
Short Circuit Current (Isc) (A)	7.81
Max Power Current (Imp) (A)	7.36
Condition	Under Normal Operating Cell Temperature, Irradiance of 800 W/m ² , spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s

Electrical data in this catalog do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.