

ATO

Solar Panel Catalog



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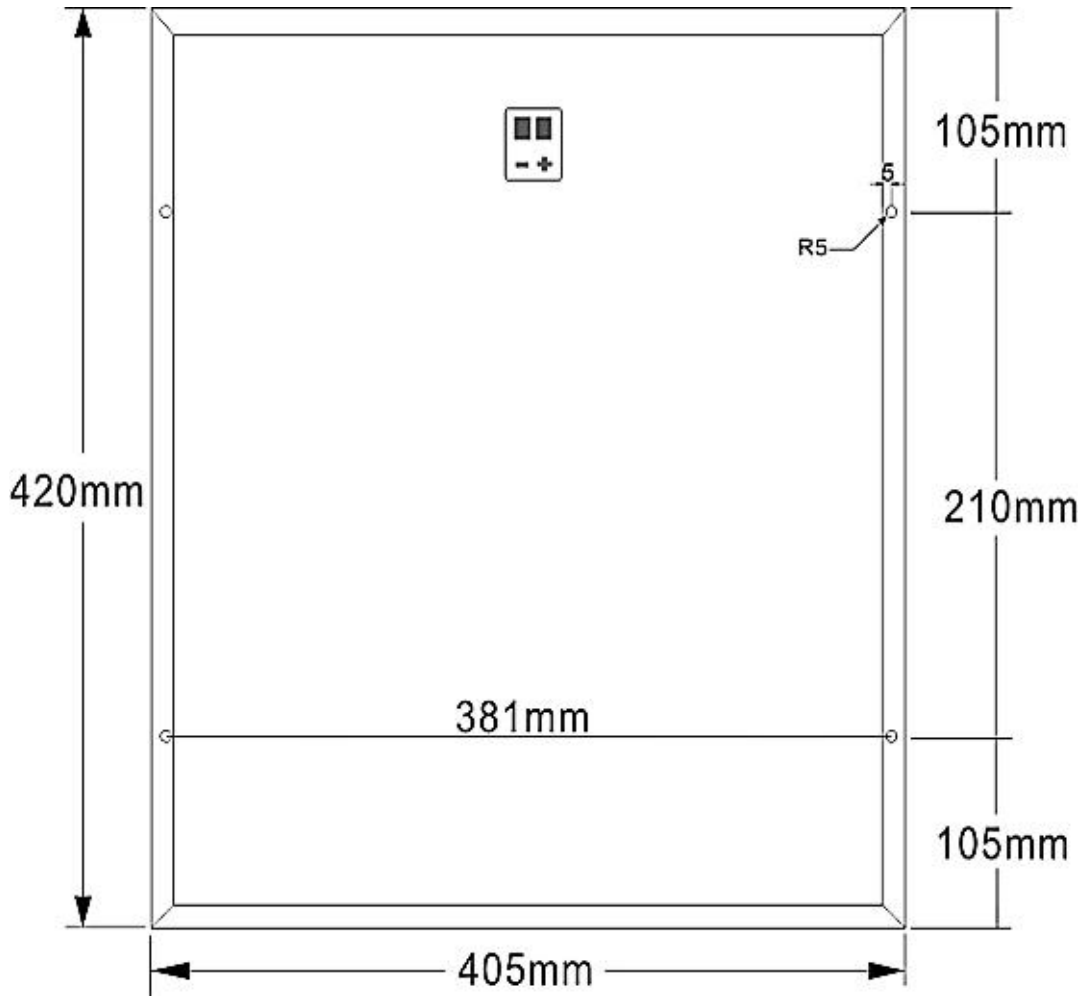


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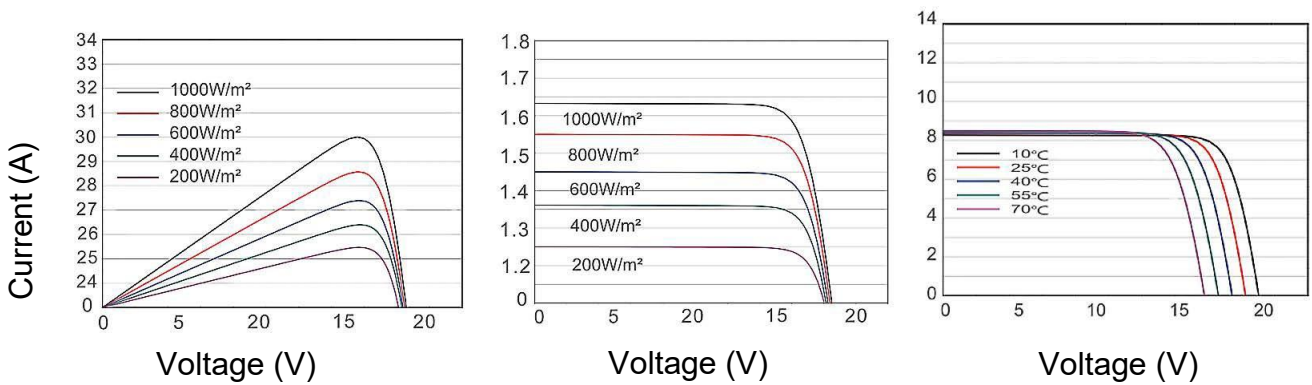
- **High Efficiency.** MBB technology is adopted to improve the photoelectric conversion efficiency and achieve higher power generation capacity.
- **Low Resistance Loss.** The design of multiple current collection lines reduces the flow distance of the current inside the cell and reduces resistance loss.
- **High Reliability.** By reducing the stress and thermal stress between cells, the reliability and long-term performance stability of the module are improved.
- **Beautiful Appearance.** Modules using MBB technology have a more detailed cell layout and less wire shielding, presenting a more beautiful appearance.
- **Adapt to Complex Environments.** With good anti-PID performance and durable anti-reflection coating, it can work in different climates and environmental conditions, and has certain pressure and wind resistance.

Mechanical Specifications	
Model	ATO-QN-182M 30W
Solar Cell	182 Mono
Power (W)	30W
Module Efficiency (%)	17.64%
Voltage at Pmax (Vmp)	18.24V
Current at Pmax (Imp)	1.64A
Open Circuit Voltage (Voc)	21.80V
Short Circuit Current (Isc)	1.74A
Dimension	420 * 405 * 25mm
Liectrical Parameters at (STC)	
Current at Pmax (Imp)	1.16A
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	32 Pcs (4 * 8)
Dimension	420 * 405 * 30mm
Weight	1.75 KG / Pcs
Junction Box	IP67 / 0 * bypass diode
Cable	//
Connector	//

Dimension



Characteristics



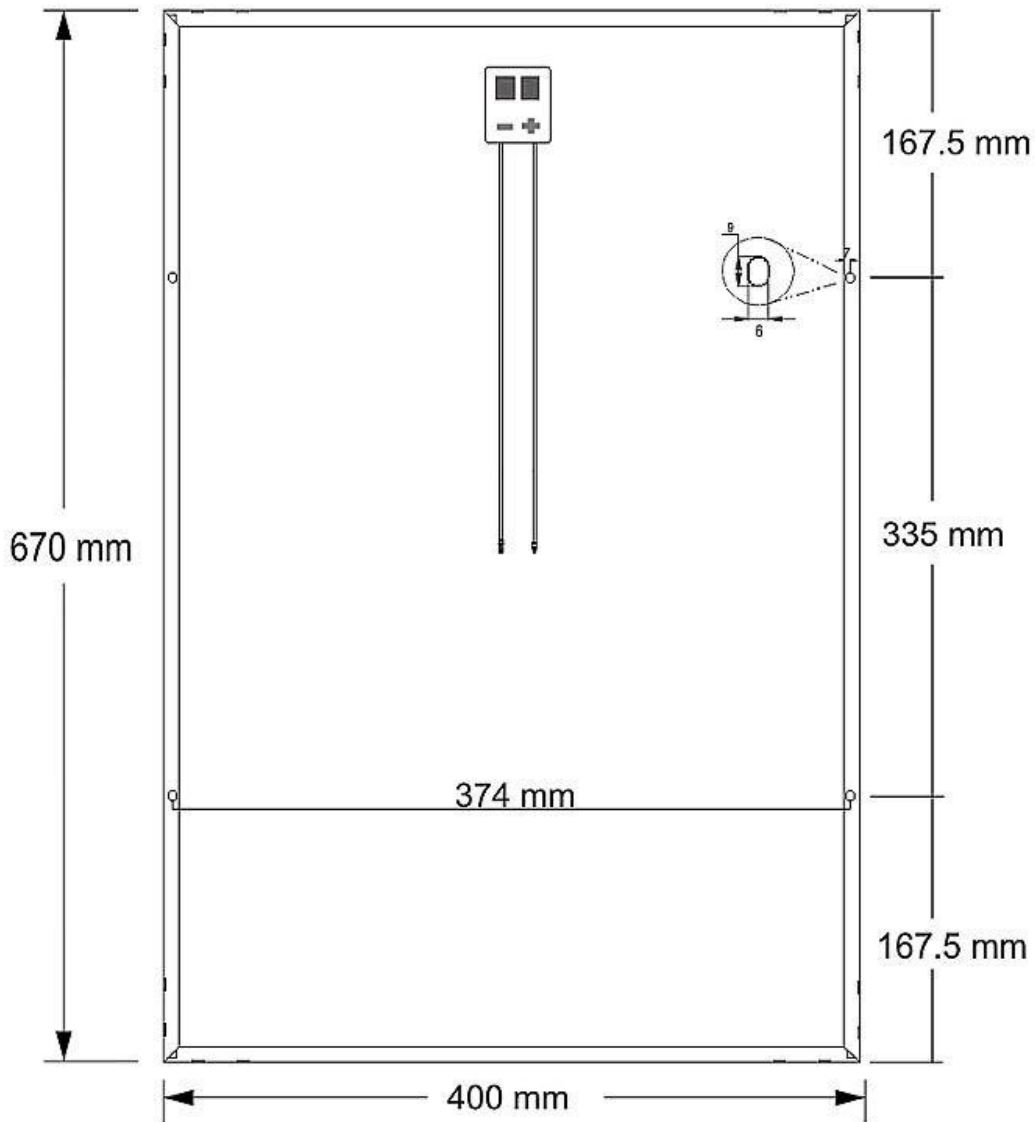


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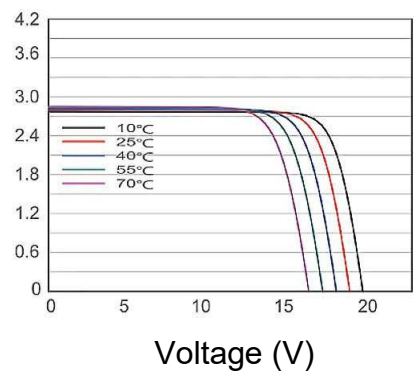
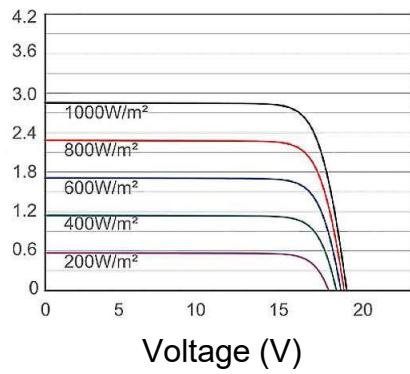
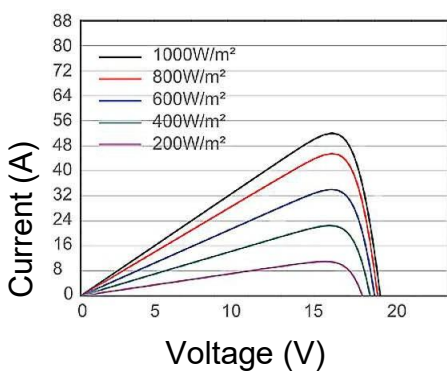
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Mechanical Specifications	
Model	ATO-QN-182M 50W
Solar Cell	182 Mono
Power (W)	50W
Module Efficiency (%)	18.6%
Voltage at Pmax (Vmp)	18.24V
Current at Pmax (Imp)	2.74A
Open Circuit Voltage (Voc)	21.80V
Short Circuit Current (Isc)	2.97A
Dimension	420 * 405 * 25mm
Electrical Parameters at (STC)	
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	32 Pcs (4 * 8)
Dimension	670 * 400 * 25mm
Weight	3.80 KG / Pcs
Junction Box	IP67 / 0 * bypass diode
Cable	//
Connector	//

Dimension



Characteristics



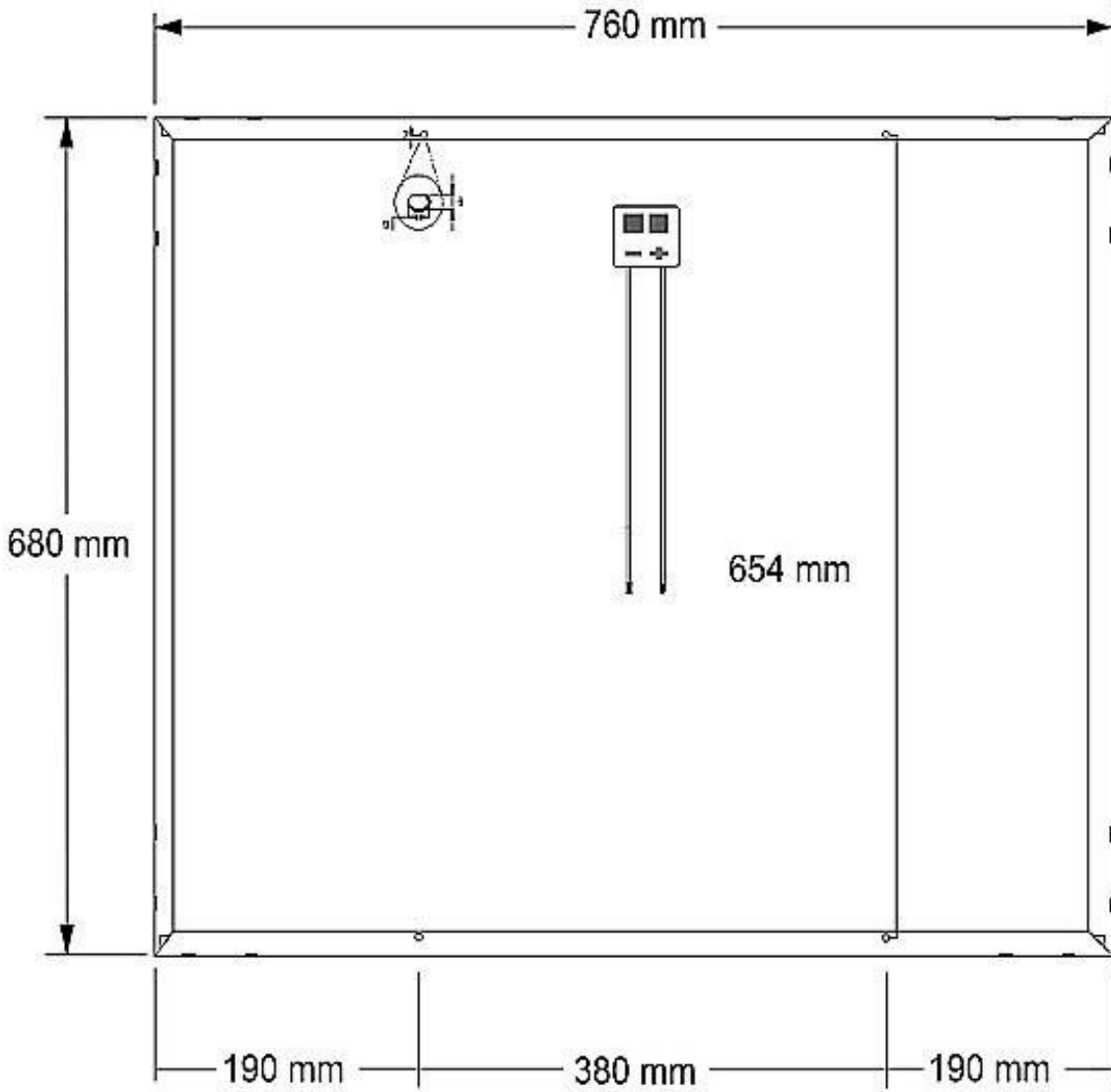


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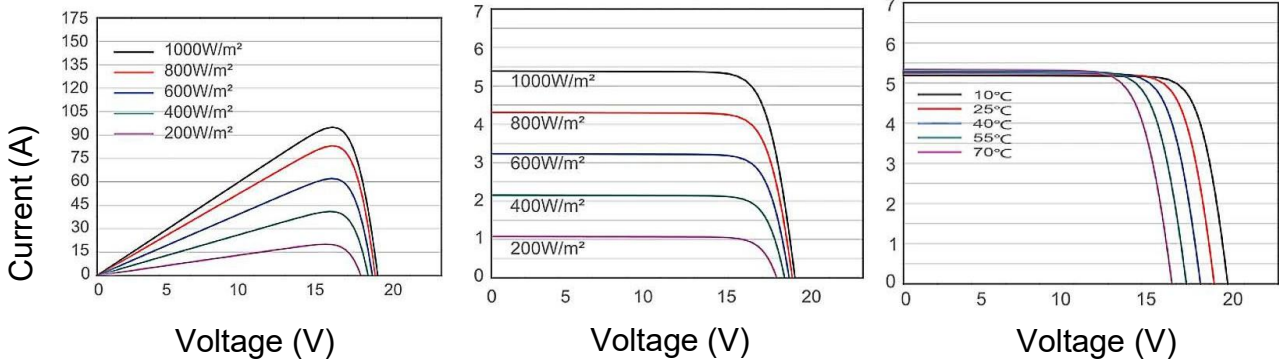
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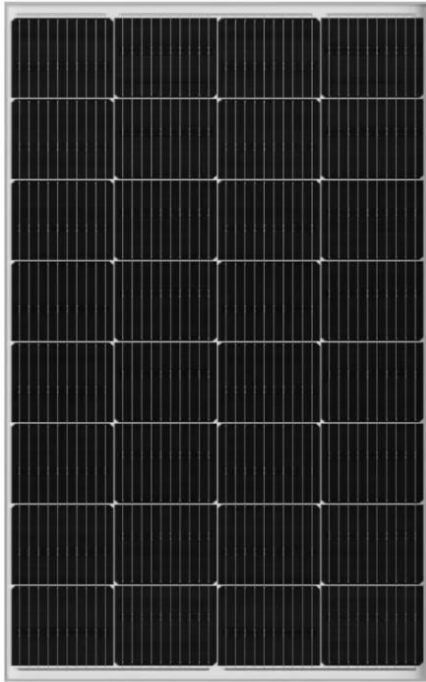
Mechanical Specifications	
Model	ATO-QN-182M 100W
Solar Cell	182 Mono
Power (W)	100W
Module Efficiency (%)	19.30%
Voltage at Pmax (Vmp)	18.24V
Current at Pmax (Imp)	5.48A
Open Circuit Voltage (Voc)	21.80V
Short Circuit Current (Isc)	5.81A
Dimension	680 * 760 * 25mm
Liectrical Parameters at (STC)	
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	32 Pcs (4 * 8)
Dimension	680 * 760 * 25mm
Weight	6.3 KG / Pcs
Junction Box	IP67 / 3 * bypass diode
Cable	2.0mm ² /500mm
Connector	Original MC4/Compatible MC4

Dimension



Characteristics



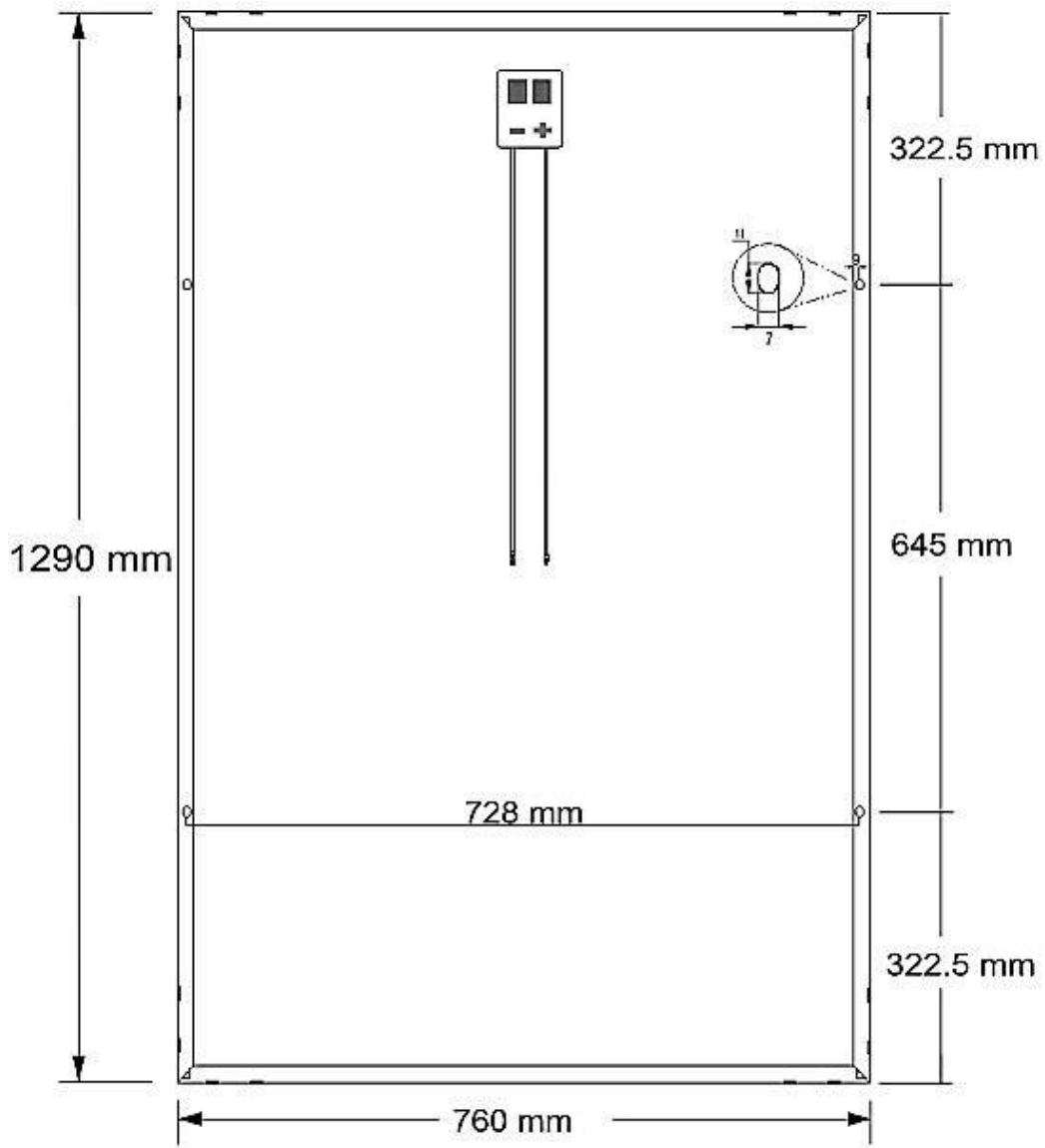


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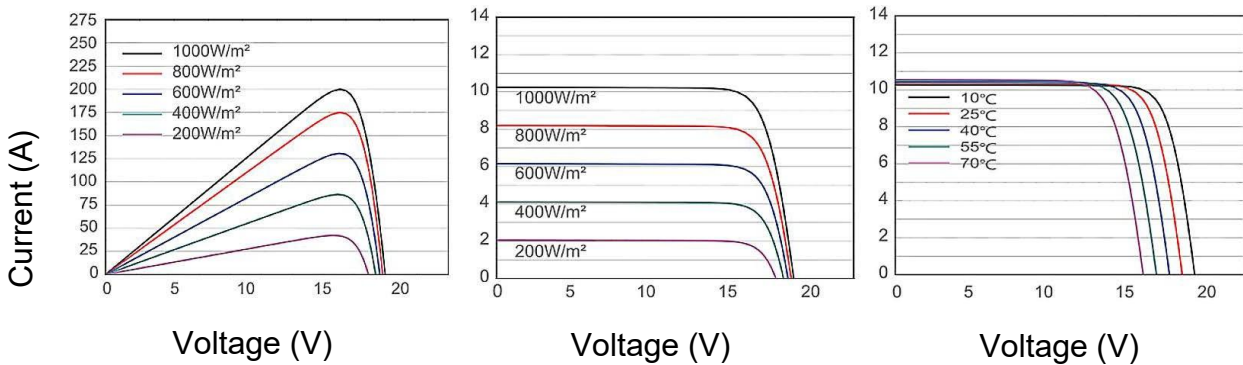
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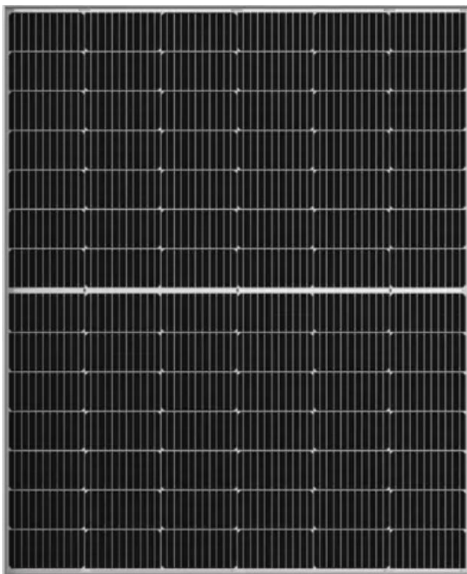
Mechanical Specifications	
Model	ATO-QN-182M 200W
Solar Cell	182 Mono
Power (W)	200W
Module Efficiency (%)	20.40%
Voltage at Pmax (Vmp)	18.24V
Current at Pmax (Imp)	10.96A
Open Circuit Voltage (Voc)	21.80V
Short Circuit Current (Isc)	11.62A
Dimension	1290 * 760 * 30mm
Electrical Parameters at (STC)	
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	32 Pcs (4 * 8)
Dimension	1290 * 760 * 30mm
Weight	10.3 KG / Pcs
Junction Box	IP67 / 2 * bypass diode
Cable	4mm ² /900mm
Connector	Original MC4/Compatible MC4

Dimension



Characteristics



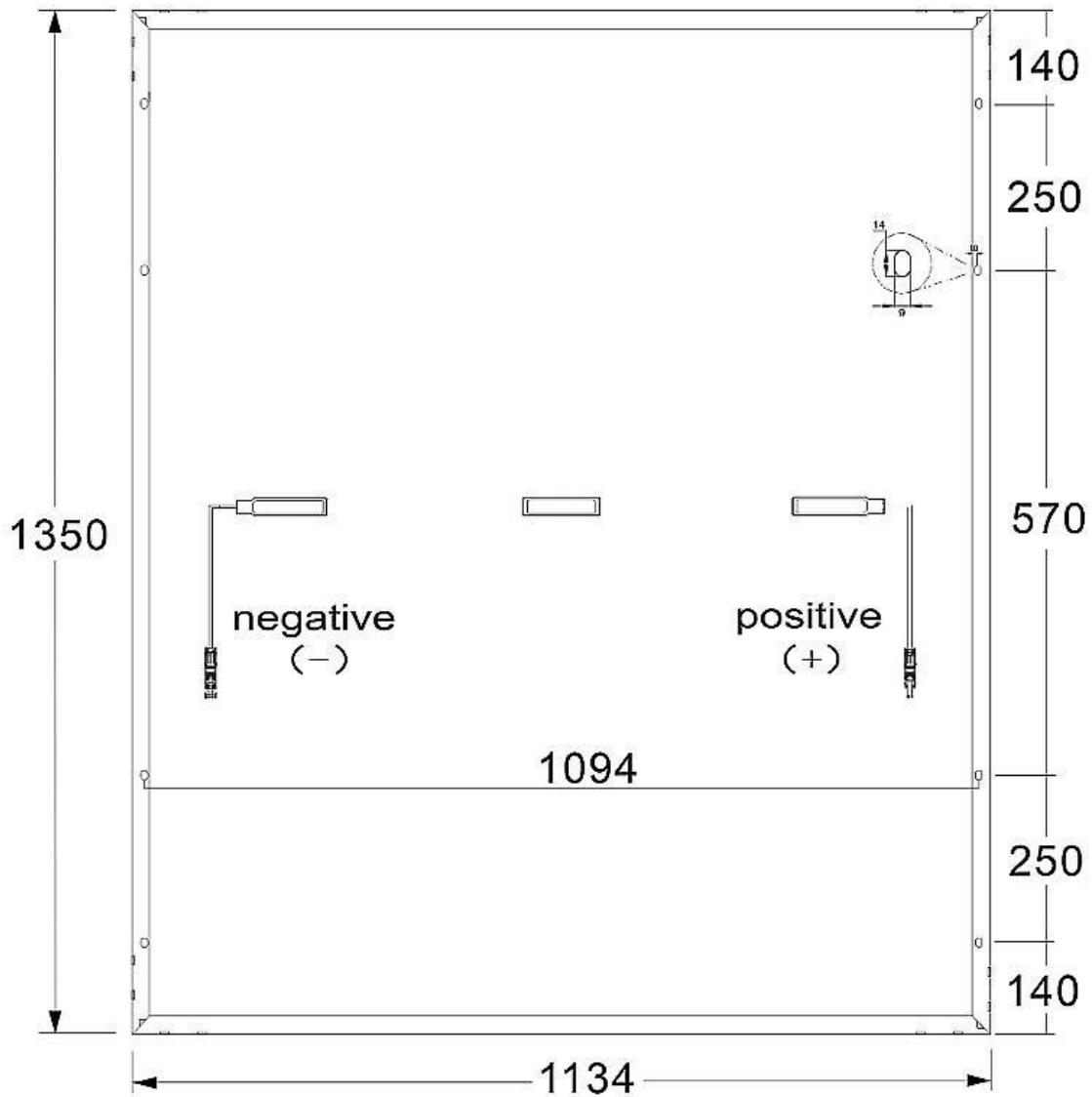


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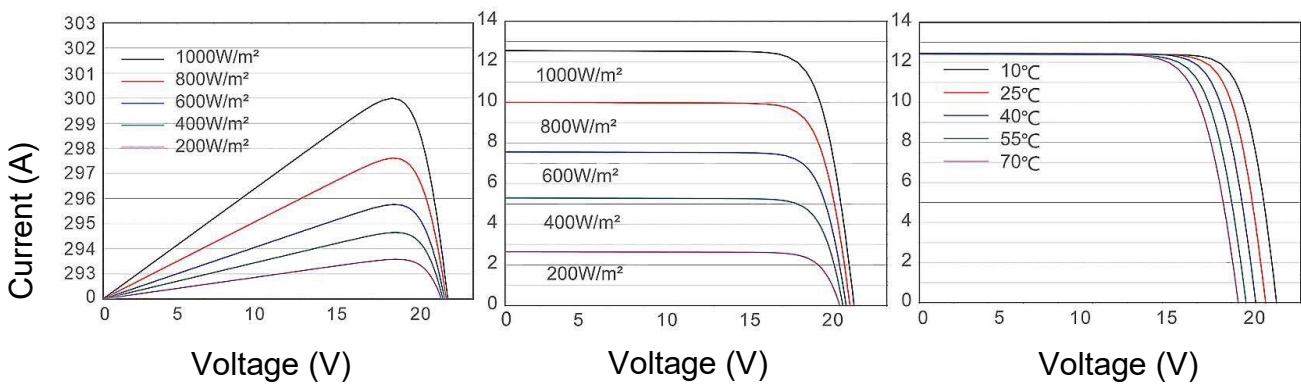
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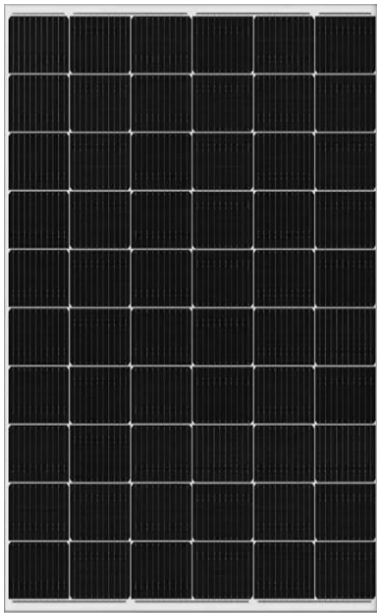
Mechanical Specifications	
Model	ATO-QN-182M 300W (Half Cut)
Solar Cell	182 Mono
Power (W)	300W
Module Efficiency (%)	19.60%
Voltage at Pmax (Vmp)	24V
Current at Pmax (Imp)	12.98A
Open Circuit Voltage (Voc)	27.5V
Short Circuit Current (Isc)	13.89A
Dimension	1350 * 1134 * 35mm
Liectrical Parameters at (STC)	
Power (W)	200W
Module Efficiency (%)	19.60%
Voltage at Pmax (Vmp)	23.22V
Current at Pmax (Imp)	13.08A
Open Circuit Voltage (Voc)	27.75V
Short Circuit Current (Isc)	14.02A
Power Tolerance (W)	±3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	84 Pcs (6 * 7 * 2)
Dimension	1350 * 1134 * 35mm
Weight	KG / Pcs
Junction Box	IP68 / 3 * bypass diode
Cable	4.0mm ² / 300mm
Connector	//

Dimension



Characteristics



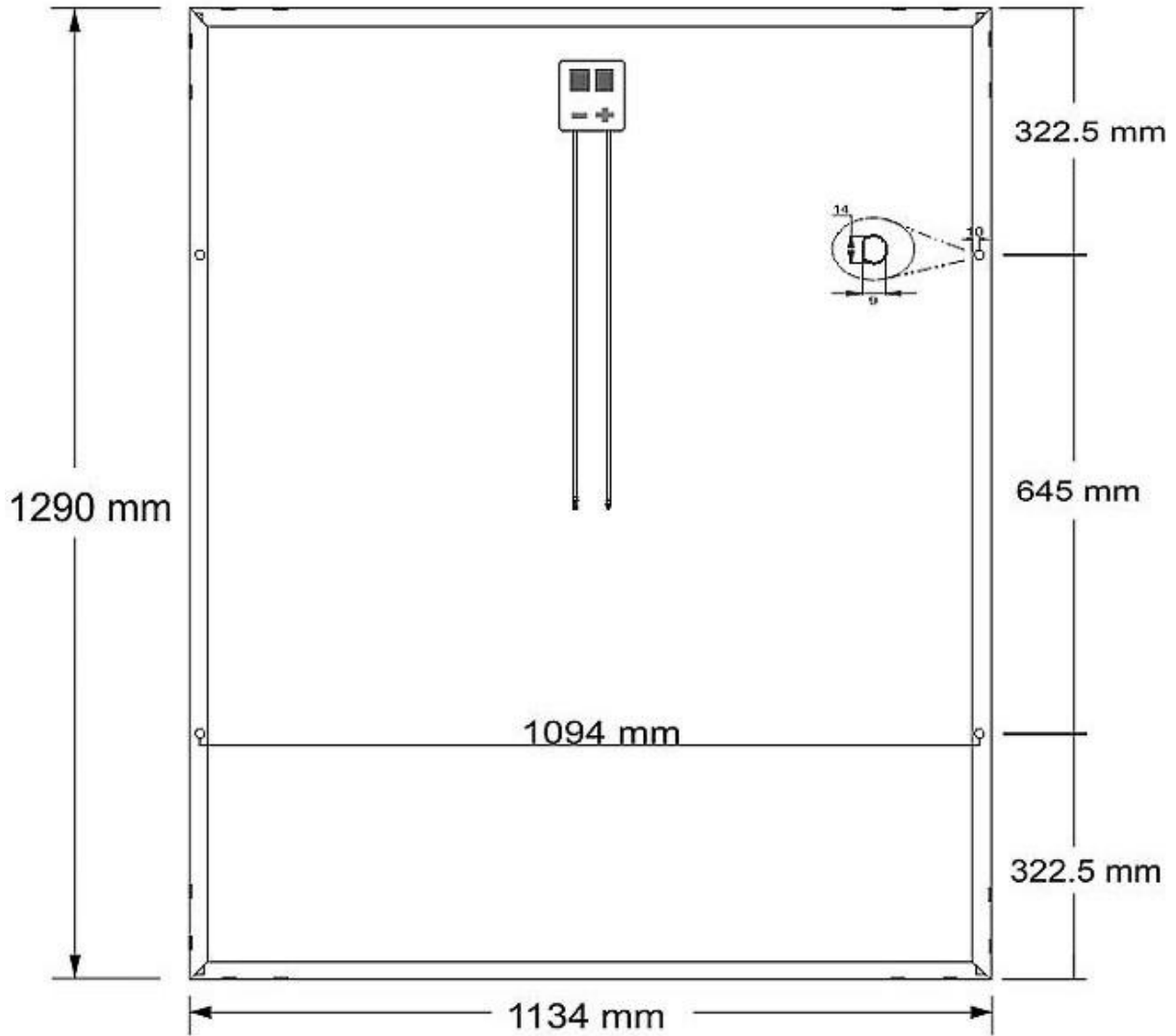


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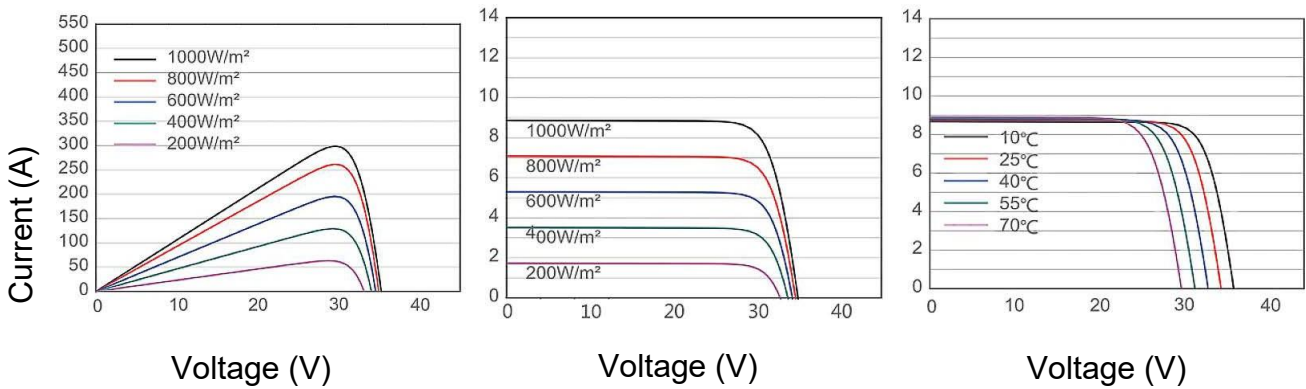
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Mechanical Specifications	
Model	ATO-QN-182M 300W (Piece)
Solar Cell	182 Mono
Power (W)	300W
Module Efficiency (%)	20.50%
Voltage at Pmax (Vmp)	34.20V
Current at Pmax (Imp)	8.77A
Open Circuit Voltage (Voc)	41.04V
Short Circuit Current (Isc)	9.30A
Dimension	1290 * 1134 * 35mm
Liectrical Parameters at (STC)	
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	60 Pcs (6 * 10)
Dimension	1290 * 1134 * 35mm
Weight	14.3 KG / Pcs
Junction Box	IP67 / 3 * bypass diode
Cable	4mm ² / 900mm
Connector	Original MC4 / Compatible MC4

Dimension



Characteristics



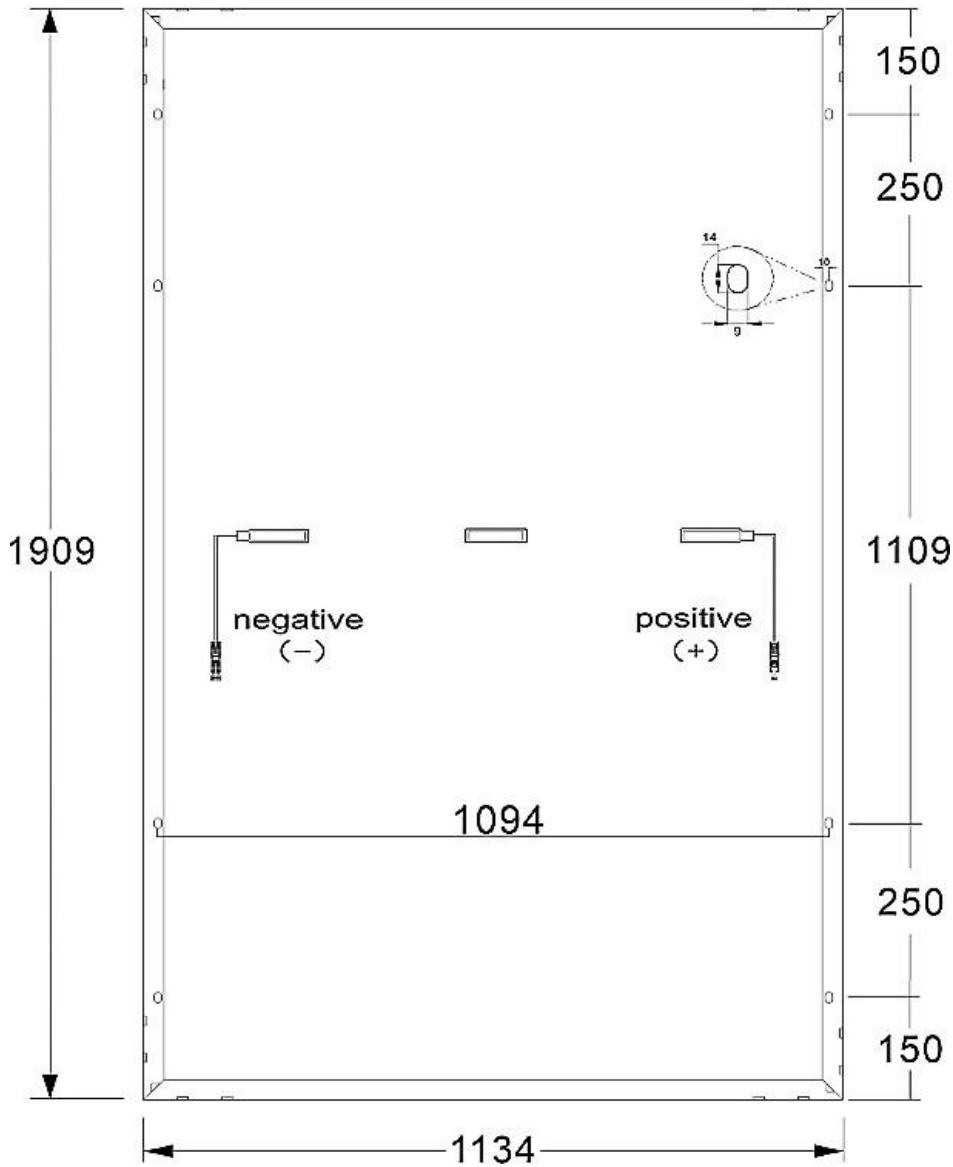


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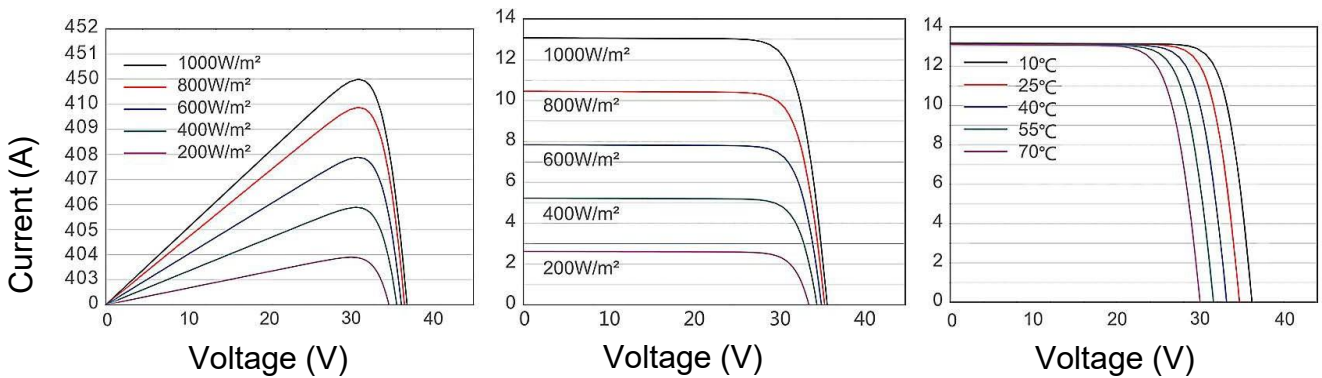
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Mechanical Specifications	
Model	ATO-QN-182M 450W (Half Cut)
Solar Cell	182 Mono
Power (W)	450W
Module Efficiency (%)	20.80%
Voltage at Pmax (Vmp)	35V
Current at Pmax (Imp)	12.98A
Open Circuit Voltage (Voc)	41.25V
Short Circuit Current (Isc)	13.89A
Dimension	1909 * 1134 * 30mm
Liectrical Parameters at (STC)	
Voltage at Pmax (Vmp)	34.67V
Current at Pmax (Imp)	12.98A
Open Circuit Voltage (Voc)	41.25V
Short Circuit Current (Isc)	13.89A
Power Tolerance (W)	±3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	120 Pcs (6 * 10 * 2)
Dimension	1909 * 1134 * 35mm
Weight	23.9 KG / Pcs
Junction Box	IP68 / 3 * bypass diode
Cable	4.0mm ² / 300mm
Connector	//

Dimension



Characteristics



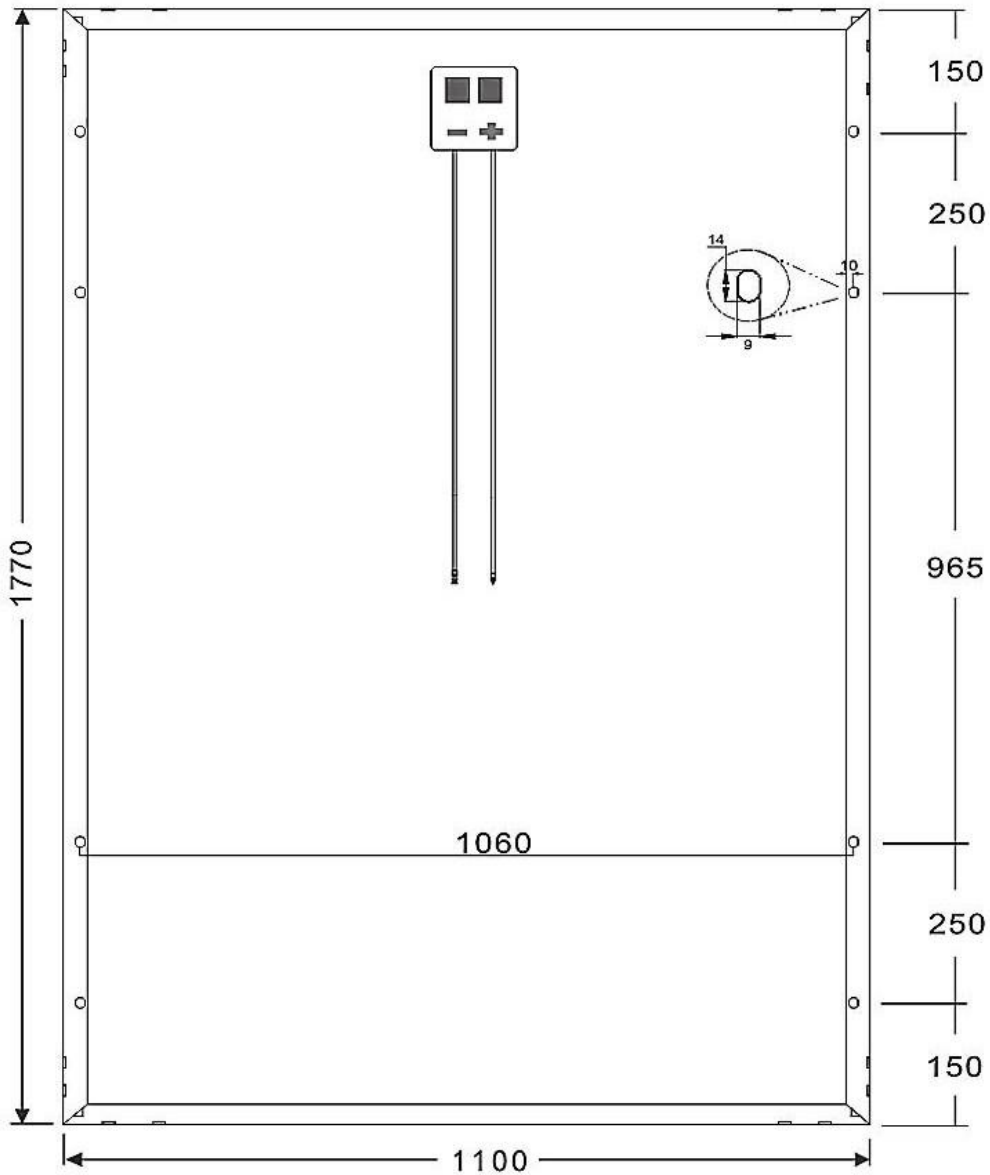


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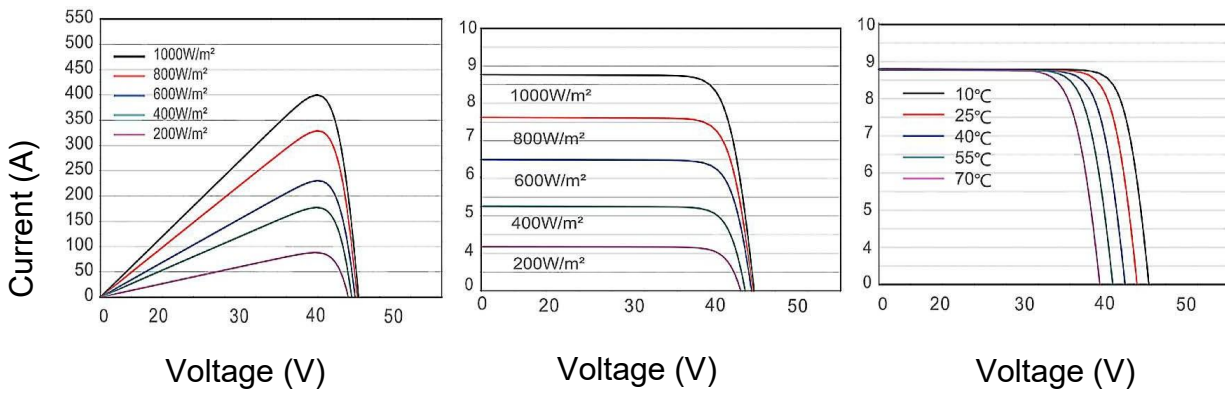
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Mechanical Specifications	
Model	ATO-QN-210M 450W (Piece)
Solar Cell	210 Mono
Power (W)	450W
Module Efficiency (%)	20.66%
Voltage at Pmax (Vmp)	50.4V
Current at Pmax (Imp)	8.92A
Open Circuit Voltage (Voc)	61.56V
Short Circuit Current (Isc)	9.45A
Dimension	1980 * 1100 * 35mm
Liectrical Parameters at (STC)	
Power (W)	400W
Module Efficiency (%)	20.6%
Voltage at Pmax (Vmp)	44.8V
Open Circuit Voltage (Voc)	54.72V
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	80 Pcs (5 * 16)
Dimension	1770 * 1100 * 35mm
Weight	21 KG / Pcs
Junction Box	IP67 / 3 * bypass diode
Cable	4mm ² / 1000mm
Connector	Original MC4 / Compatible MC4

Dimension



Characteristics



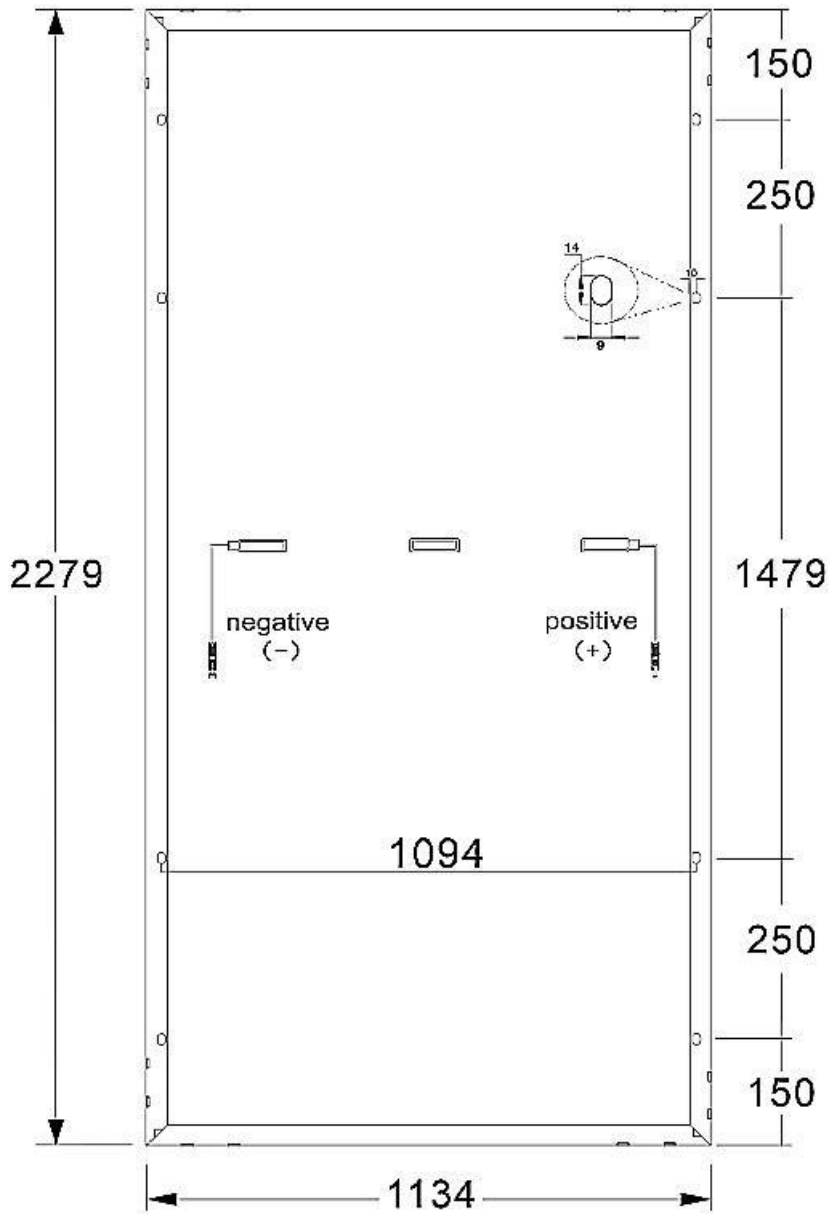


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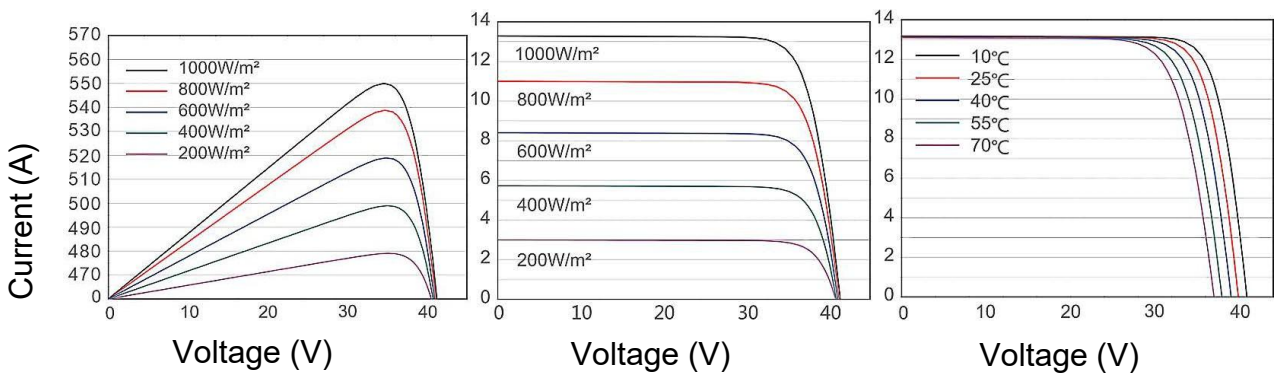
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Mechanical Specifications	
Model	ATO-QN-182M 550W
Solar Cell	182 Mono
Power (W)	550W
Module Efficiency (%)	21.30%
Voltage at Pmax (Vmp)	41V
Current at Pmax (Imp)	13.11A
Open Circuit Voltage (Voc)	49.95V
Short Circuit Current (Isc)	14.05A
Dimension	2279 * 1134 * 35mm
Liectrical Parameters at (STC)	
Voltage at Pmax (Vmp)	41.97V
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	144 Pcs (6 * 24 * 2)
Dimension	2279 * 1134 * 35mm
Weight	28.32 KG / Pcs
Junction Box	IP68 / 3 * bypass diode
Cable	4mm ² /300mm
Connector	//

Dimension



Characteristics

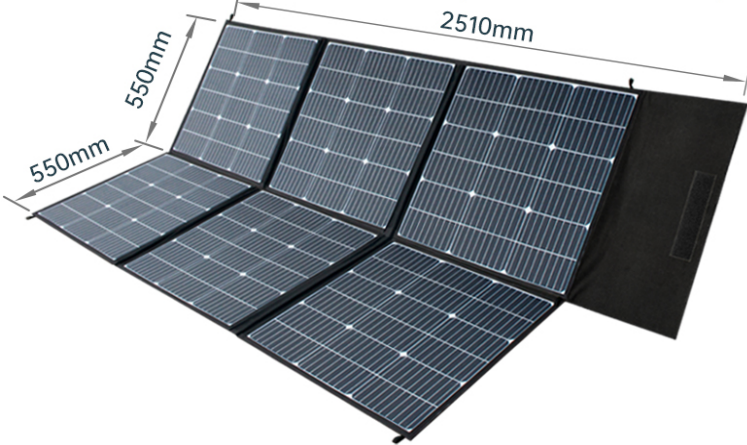
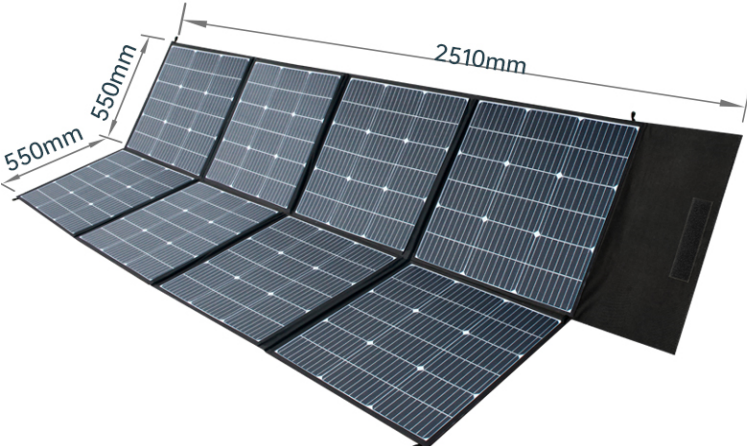
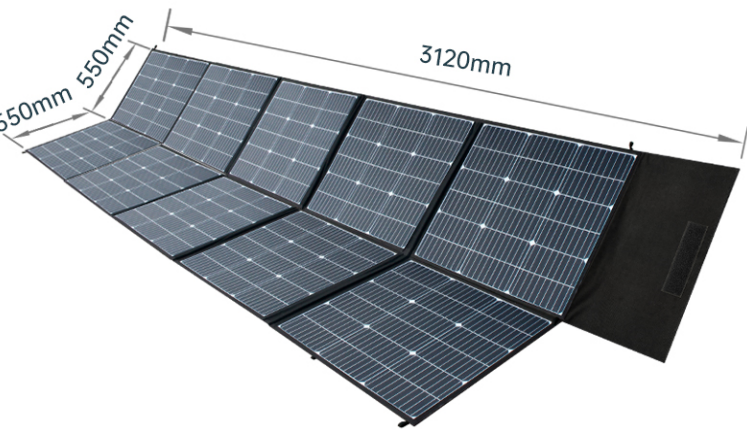




Features:

- Foldable design is better to put and easier to carry anywhere.
- Built-in bracket design is better for charging anytime, anywhere.
- ETFE film has excellent light transmittance and weather resistance, as well as heat, corrosion and UV resistance.
- Longer service life is for higher cost performance.

Mechanical Specifications	
Model	ATO-DF (Folding)
Solar Cell	Monocrystalline
Surface material	ETFE
Cloth color	Black
Open size	1920 × 1100mm / 2510 × 1100mm / 3120 × 1100mm
Folding size	570 × 550mm
No. of folding	6 = 2 * 3 / 8 = 2 * 4 / 10 = 2 * 5
Net weight	6.3 KG / 8.4 KG / 10.5 KG
Type of Connector	XT60 + Anderson + GX16 + DC
Additional design	Kickstands
Certifications	CE, FCC, ROHS, REACH
Electrical Specifications	
Standard Test Condition	Irrandiance 1000W/m ² Module temperature 25°C, AM=1.5
Maximum power (Pm)	300W / 400W / 500W
Voltage at max power (Vmp)	18V
Current at max power (Imp)	16.6A / 22.2A / 27.8A
Open circuit voltage (Voc)	21.6V
Short circuit current (Isc)	18.1A / 24.2A / 30.3A
Temperature Coefficient of Pmax	(-0.41% /°C)
Temperature Coefficient of Voc	(-0.33% /°C)
Temperature Coefficient of Isc	(+0.06% /°C)
Other Performance Datas	
Power Tolerance	-0%, +5%
Maximum System Voltage	1000V DC/ 1500V DC / 1500V DC
Maximum Series Fuse Rating	20A / 25A / 35A
Operating Temperature	-20°C~65°C
Noct*	45°C ±2 °C

Open Size	Maximum Power (Pm)	Product Photo
300W	1920 × 1100mm	 <p>Diagram of a 300W folding solar panel. It consists of three rectangular panels connected by hinges. The overall width is 2510mm and the height is 550mm. The panels are shown in a partially folded state.</p>
400W	2510 × 1100mm	 <p>Diagram of a 400W folding solar panel. It consists of four rectangular panels connected by hinges. The overall width is 2510mm and the height is 550mm. The panels are shown in a partially folded state.</p>
500W	3120 × 1100mm	 <p>Diagram of a 500W folding solar panel. It consists of five rectangular panels connected by hinges. The overall width is 3120mm and the height is 550mm. The panels are shown in a partially folded state.</p>



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- Longer service life is for higher cost performance.

Mechanical Specifications

Model	ATO-DF (Portable)
Solar Cell	Mono
Surface material	ETFE
Cloth color	Black
Open size	950 × 290mm / 970 × 410mm / 1330 × 530mm / 2290 × 540mm
Folding size	365 × 290mm / 370 × 410mm / 370 × 530mm / 610 × 540mm
No. of folding	3 = 1 * 3 / 3 = 1 * 3 / 4 = 1 * 4 / 4 = 1 * 4
Net weight	1.0 KG / 1.75 KG / 2.9 KG / 4.2 KG
Type of Connector	DC + USB + Type-C / Anderson + XT60 + GX16 + DC
Additional design	Kickstands
Certifications	CE, FCC, ROHS, REACH

Electrical Specifications

Standard Test Condition	Irradiance 1000W/m ² Module temperature 25°C, AM=1.5
Maximum power (Pm)	40W / 60W / 100W / 200W
Voltage at max power (Vmp)	20V
Current at max power (Imp)	2.0A / 3.0A / 5.0A / 10A
Open circuit voltage (Voc)	24V
Short circuit current (Isc)	2.15A / 3.2A / 5.4A / 10.75A
Temperature Coefficient of Pmax	(-0.41% / °C)
Temperature Coefficient of Voc	(-0.33% / °C)
Temperature Coefficient of Isc	(+0.06% / °C)

Other Performance Data

Power Tolerance	-0%, +5%/± 5%
Maximum System Voltage	300V DC / 700V DC / 700V DC / 1000V DC
Maximum Series Fuse Rating	5A / 5A / 10A / 15A
Operating Temperature	-20°C~65°C
Noct*	45°C ± 2°C