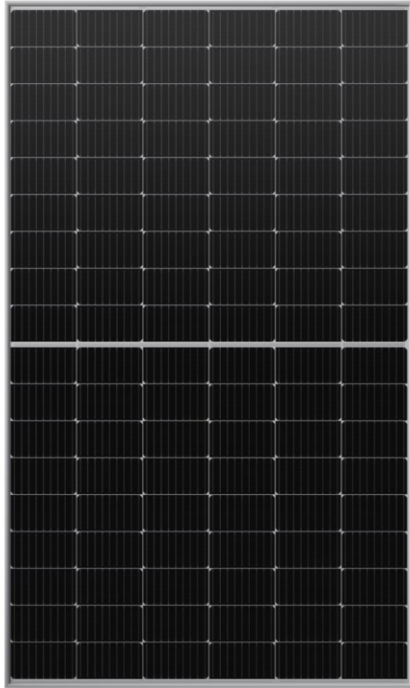




TOENERGY
Way to Solar Energy



182 Series

400-415W

MBB Mono Half-cell Module

POWER OUTPUT RANGE

400-415W



MAXIMUM MODULE EFFICIENCY

21.3%



POWER WARRANTY

30 years



Characteristic



Higher Power Output

Multi-busbar technology
1500V system voltage, reduce the BOS cost



Guaranteed Output Power

Module power positive tolerance



Half-cell and Lower Power Loss Design

Half-cell design, with lower resistance, improve the module efficiency



Best Solution to Harsh Conditions

Pass the mechanical load test, front 5400Pa and back 2400Pa



Excellent PID Resistance

Excellent Anti-PID Performance, guarantee less power degradation



High Reliability Based On Strict Quantity Control

Over 100 internal tests including ultraviolet irradiation, heat-recycling, damp heat(DH) test, humidity-freeze(HF) test and etc.



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Scan and focus on us



Electrical Data @STC

Peak power-Pmax(Wp)	400	405	410	415
Power tolerance(W)	±3%			
Open circuit voltage - Voc(V)	36.85	36.95	37.05	37.15
Maximum power voltage - Vmpp(V)	31.20	31.30	31.40	31.50
Short circuit current - Im(A)	13.57	13.7	13.83	13.96
Maximum power current - Imp(A)	12.82	12.94	13.06	13.17
Module efficiency η (%)	20.15	20.7	21.0	21.3

Standard testing condition(STC): Irradiance 1000W/m², Temperature 25°C, AM 1.5

Mechanical Data

Cell size	Mono182×182mm
NO.of cells	108Half Cells (6×18)
Dimension	1723*1134*35mm
Weight	22.0kg
Glass	3.2mm high transmission, Anti-reflection coating toughened glass
Frame	Anodized aluminum alloy
Junction box	Separated Junction box IP68 3 bypass diodes
Connector	AMPHENOLH4/MC4 connector
Cable	4.0mm ² , 300mm PV CABLE, length can be customized

Temperature Ratings

Nominal operating cell temperature	45±2°C
Temperature coefficient of Pmax	-0.35%/°C
Temperature coefficients of Voc	-0.27%/°C
Temperature coefficients of Isc	0.048%/°C

Maximum Ratings

Operating temperature	-40°C to +85°C
Maximum system voltage	1500v DC (IEC/UL)
Maximum series fuse rating	25A
Pass hail test	Diameter 25mm, speed 23m/s

Warranty

12 Years Workmanship Warranty
30 Years Performance Warranty

Packing Data

Modules per pallet	31 PCS
Modules per 40HQ container	806 PCS
Modules per 13.5m long flatcar	930 PCS
Modules per 17.5m long flatcar	1240 PCS

Dimension

