

TN-12M/132 Cells

650 - 670W

12BB Half-cut Mono Perc



SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61703
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems



PERFORMANCE WARRANTY



KEY FEATURES



12BB Half-cut Cell Technology

New circuit design, lower internal current, lower Rs loss
Ga doped wafer, attenuation <2% (1st year) / ≤0.55% (Linear)



Significantly Lower the Risk of Hot Spot

Special circuit design with much lower hot spot temperature



Lower LCOE

2% more power generation, lower LCOE



Excellent Anti-PID Performance

2 times of industry standard Anti-PID test



IP68 Junction Box

High waterproof level

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	650	492	655	495	660	499	665	503	670	507
Operating Voltage (Vmpp/V)	37.8	35.4	38.0	35.6	38.2	35.8	38.4	36.0	38.6	36.1
Operating Current (Imp/A)	17.20	13.88	17.24	13.91	17.28	13.95	17.32	13.99	17.36	14.02
Open-Circuit Voltage (Voc/V)	45.4	42.9	45.6	43.1	45.8	43.3	46.0	43.5	46.2	43.7
Short-Circuit Current (Isc/A)	18.29	14.74	18.33	14.77	18.37	14.81	18.41	14.84	18.45	14.87
Module Efficiency (%)	20.90		21.10		21.30		21.40		21.60	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25°C. Power output tolerance: 0~+5W, Test uncertainty for Pmax : ±3% NMOT : Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20°C, Wind speed 1m/s

MECHANICAL CHARACTERISTICS

Solar Cell	Monocrystalline 210*210mm
No. of Cells	132 (6*22)
Module Dimensions	2384*1303*35mm (93.86*51.30*1.38inches)
Weight	34.5kg (76.06lbs.)
Front Glass	3.2mm AR Coating Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm ² (IEC), 12AWG(UL) 300mm in Length or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximum System Voltage	1000V/1500V/DC
Operating Temperature	-40°C~+85°C
Maximum Series Fuse	30A
Safety Protection Class	Class II
Mechanical Load (Front side)	5400Pa
Mechanical Load (Back side)	2400Pa

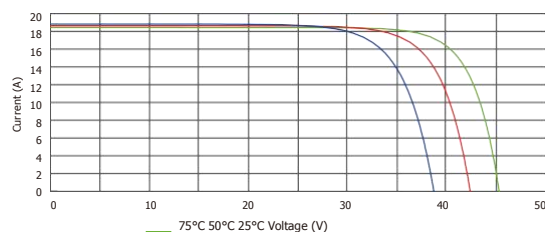
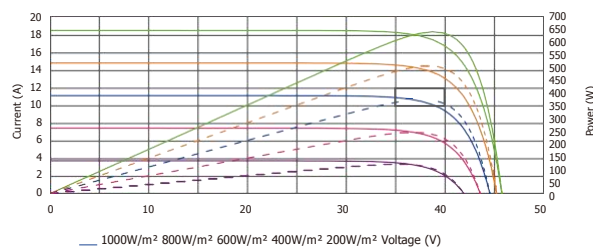
TEMPERATURE CHARACTERISTICS

Temperature Coefficient of Pmax	-0.34%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.046%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

PACKING CONFIGURATION

Pieces Per Pallet	31	31(USA)
Pieces Per Container(40'HQ)	527	527

I-V CURVE



TECHNICAL DRAWINGS

