



未来光能
FUTURE ENERGY

FUTURE210R Series

132 Half-piece Bifacial Dual Glass HJT Module

620~640W



OBB Technology

Less light obstruction and stronger current collection ability



Up to 90% Bifaciality

Natural symmetrical bifacial structure bringing more energy yield from the backside.



Better temperature coefficient

-0.24%/°C, More stable power generation



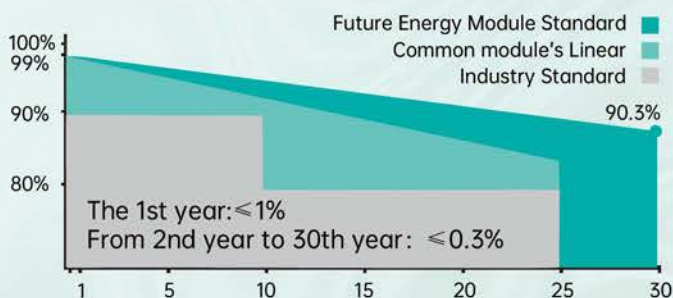
High Reliability

Excellent anti-LID & anti-PID performance, Sealing with PIB based sealant, Stronger water resistance, greater air impermeability to extend module lifespan.



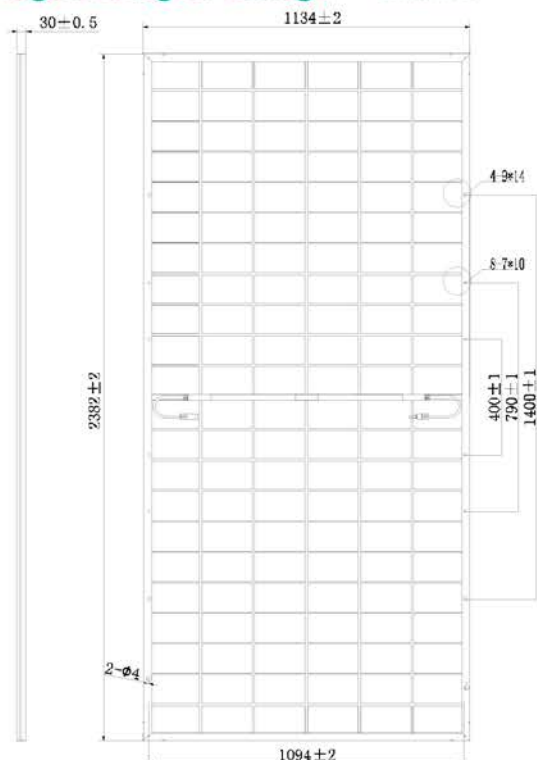
Suitable for Utility Solar projects

Lower BOS cost, lower LCOE



15^y Product Warranty

30^y Linear Power Warranty

Engineering Drawings Unit: mm

Mechanical Characteristics

Solar cells	n-type HJT
Cell configuration	132cells (6×22)
Module dimensions	2382×1134×30mm
Weight	33.6kg
Superstrate	2.0mm,High Transmission,AR Coated Heat Strengthened Glass
Substrate	2.0mm,Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
J-Box	IP68
Cables	4.0mm ² ,300mm, or customized length
Connector	MC4-EVO 2A
Packing Configuration	
36PCS per pallet , 720PCS per 40ft(HQ)	

ELECTRICAL DATA (STC*)

Rated Power in Watts-Pmax(Wp)	620	625	630	635	640
Maximum Power Voltage-Vmpp(V)	42.30	42.46	42.62	42.77	42.93
Maximum Power Current-Impp(A)	14.66	14.72	14.79	14.85	14.91
Open Circuit Voltage-Voc(V)	50.98	51.16	51.35	51.53	51.71
Short Circuit Current-Isc(A)	15.42	15.47	15.52	15.57	15.62
Module Efficiency (%)	22.95	23.14	23.32	23.51	23.69

*STC: Irradiance 1000 W/m², cell temperature 25°C, AM=1.5. Tolerance of Pmax is within +/- 3%.

Electrical characteristics with 10% rear side power gain

Total Equivalent power -Pmax(Wp)	682	688	693	699	704
Maximum Power Voltage-Vmpp(V)	42.30	42.46	42.62	42.77	42.93
Maximum Power Current-Impp(A)	16.13	16.19	16.27	16.34	16.40
Open Circuit Voltage-Voc(V)	50.98	51.16	51.35	51.53	51.71
Short Circuit Current-Isc(A)	16.96	17.02	17.07	17.13	17.18

Application Environment&Temperature Characteristics

Operating Module Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
Maximum Series Fuse	30A
Power Tolerance	0~+5W
Bifaciality	85%±5%
Safety Class	Class II
Nominal Operating Cell Temp.(NOCT)	45±2°C
Temperature Coefficient of Pmax	-0.24%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	0.04%/°C

