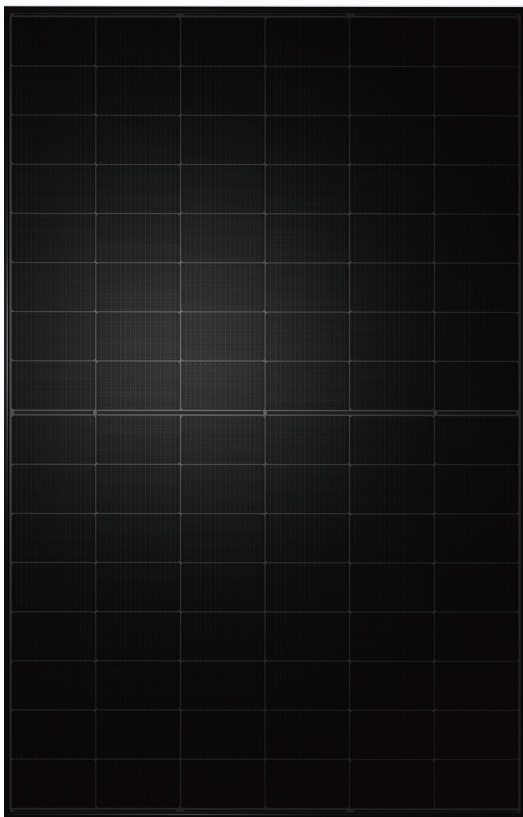


450~470W

Module HC 96 Dual Glass Bifacial Full Black

Mono-Crystalline N Type



0~+3

POWER SORTING

23.52%

MAX MODULE EFFICIENCY

≤1.0%

FIRST YEAR POWER DEGRADATION

≤0.4%

YEAR 2-25 POWER DEGRADATION

Key Features



Multi Busbar Solar Cell



High Efficiency



PID Resistance



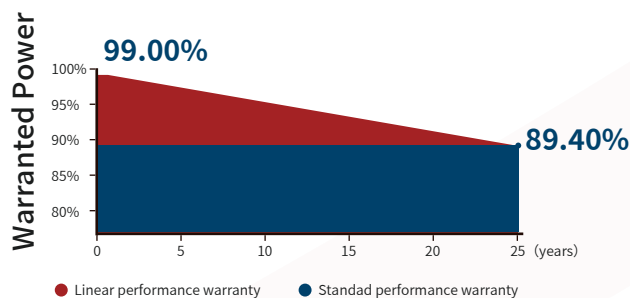
Low-light Performance



Severe Weather Resilience



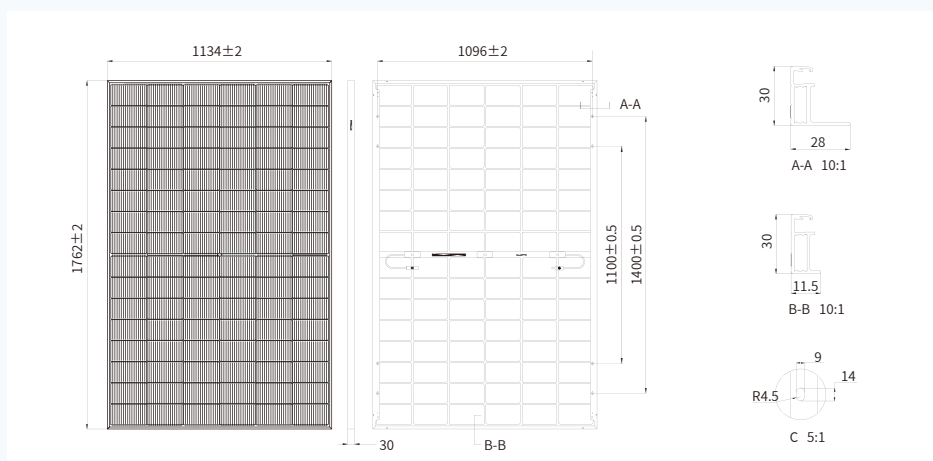
Durability Against Extreme Environmental Conditions



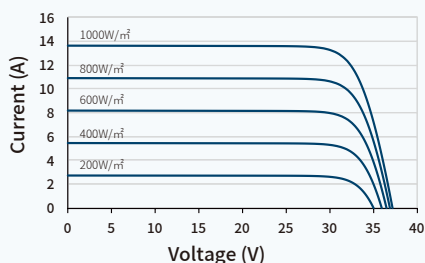
Warranty



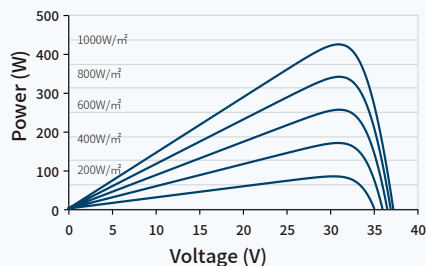
Drawings (Unit:mm)



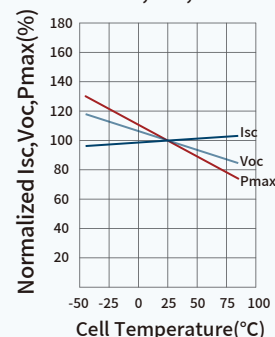
Current-Voltage (450W)



Power-Voltage (450W)



Temperature Dependence of Isc, Voc, Pmax



Mechanical Parameters

Cells	Mono N TYPE
Cell Orientation	96[6x16]
Dimension	1762±2x1134±2x30mm
Weight	23kg
Front / Back Glass	2.0+2.0mm (0.078+0.078 inch)
Frame	Anodized aluminum alloy black frame
Junction Box	IP68, 3 diodes
Connector	Staubli MC4-EVO2
Cable Length	±1200mm, 1x4.0mm²
Fire Rating	UL: Type 1, IEC:Class C
Maximum Static Load	6,000 Pa (front) / 4,000 Pa (rear)
Packaging	36pcs/pallet, 72pcs/stack, 792pcs per Truck

Temperature Parameters

Temperature Coefficient (Pmax)	-0.30%/°C
Temperature Coefficient (Voc)	-0.25%/°C
Temperature Coefficient (Isc)	+0.046%/°C
NMOT	41±2°C

Maximum Ratings

Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30 A
Power Output Tolerance	0~+3%

Electrical Characteristics(STC)

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass1.5, Measuring Tolerance: ±3%

Maximum Power:Pmax[W]	450	455	460	465	470
Open Circuit Voltage:Voc[V]	35.03	35.21	35.39	35.57	35.75
Short Circuit Current:Isc[A]	16.05	16.10	16.15	16.20	16.25
Voltage at Maximum Power:Vmp[V]	30.08	30.26	30.44	30.62	30.80
Current at Maximum Power:Imp[A]	14.97	15.04	15.11	15.19	15.26
Module Efficiency: η[%]	22.52	22.77	23.02	23.27	23.52

Electrical Characteristics(NMOT)

NMOT: Irradiance 800W/m², Ambient Temperature 20°C, Air Mass1.5, Wind Speed 1m/s

Maximum Power:Pmax[W]	338	342	346	349	353
Open Circuit Voltage :Voc[V]	33.28	33.45	33.62	33.79	33.96
Short Circuit Current :Isc[A]	12.96	12.99	13.03	13.07	13.11
Voltage at Maximum Power:Vmp[V]	27.96	28.14	28.31	28.48	28.64
Current at Maximum Power:Imp[A]	12.09	12.15	12.22	12.26	12.32

Electrical Characteristics(Rear Power Gain)

5%	Maximum Power:Pmax[W]	473	478	483	488	494
	Module Efficiency: η [%]	23.65	23.91	24.17	24.44	24.70
15%	Maximum Power:Pmax[W]	518	523	529	535	541
	Module Efficiency: η [%]	25.90	26.19	26.48	26.76	27.05
25%	Maximum Power:Pmax[W]	563	569	575	581	588
	Module Efficiency: η [%]	28.15	28.46	28.78	29.09	29.40