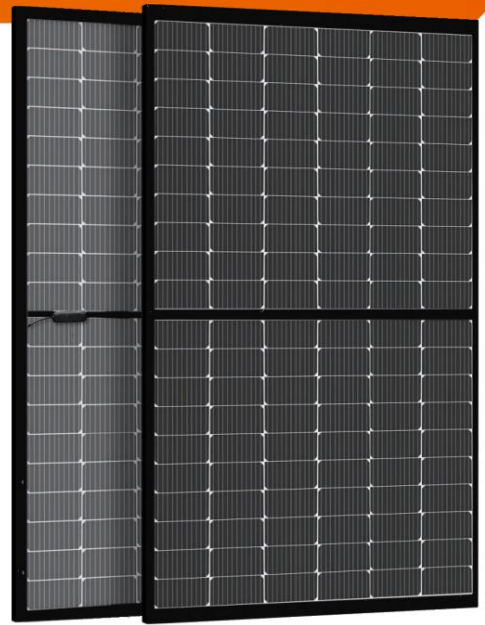


Solar panel

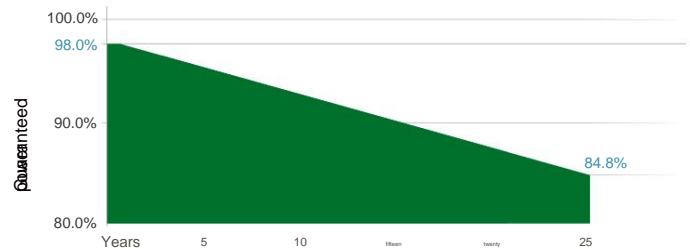
Mono-Crystalline PERC
BLACK BIFACIAL

Main Features

- PERC / Half Cut
- Best temperature coefficient (Pmpp)
- Non-destructive cutting
- PID resistance
- Low BOS and LCOE cost •
Bifacial gain



Warranty



SE-182*91-xxxM-120-BH

450-460 Watts



Complete certification of systems and products.

IEC 61215, IEC 61730, UL61730
ISO 9001:2015:ISO Quality Management System
ISO 14001:2015:ISO Environment Management System
ISO 45001:Occupational Health and Safety



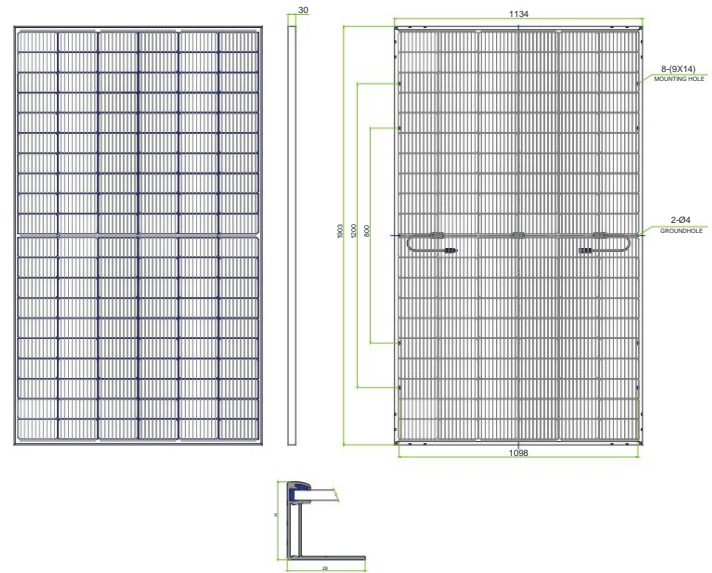
POWER RANGE

ENERGY CLASSIFICATION

MAXIMUM EFFICIENCY
OF THE MODULEFIRST YEAR
ENERGY DEGRADATIONYEAR 2-25
ENERGY DEGRADATION

Mechanical Specifications

External dimensions (L x W x H)	1903 x 1134 x 30 mm
Cell type	monocrystalline PERC
No. of cells	120(6*20)
Frame technology	Black silver anodized aluminum
Front Glass	3.2mm
Cable length (including connector)	1200mm; Custom length
Cable diameter (IEC/UL)	4mm ² / 12AWG
Maximum mechanical test load	5400 Pa (front) / 2400 Pa (rear)
Connector type (IEC/UL)	Compatible with MC4
Module weight	23.4kg
packaging unit	36 pcs/pallet
Packaging unit weight	872kg/pallet
Modules per 53 ft truck	1008 pcs (28 pallets)



Electrical Specifications

STC: Irradiance 1000W/m², Cell temperature 25° C, AM=1.5

Rated output (Pmpp/Wp)	450	455	460
Rated voltage (Vmpp/V)	34.67	34.82	34.96
Rated current (Impp/A)	12.98	13.07	13.16
Open circuit voltage (Voc/V)	41.09	41.24	41.39
Short circuit current (Isc/A)	13.86	13.95	14.04
Module efficiency	20.85%	21.08%	21.32%

NMOT: Irradiance 800W/m², Ambient temperature 20° C, AM=1.5, Wind speed 1m/s

Rated output (Pmpp/Wp)	338.0	342.0	3.4.5
Rated voltage (Vmpp/V)	32.28	32.45	32.52
Rated current (Impp/A)	10.47	10.54	10.61
Open circuit voltage (Voc/V)	39.06	39.20	39.35
Short circuit current (Isc/A)	11.18	11.25	11.32

Electrical Specifications (Integrated Power)

Pmpp win	Pmpp / Wp	Vmpp / V	Imp/A	Voc/V	Isc/A
5%	477	34.63	13.80	41.68	14.34
10%	500	34.63	14.45	41.68	15.03
fifteen%	523	34.74	15.06	41.78	15.65
twenty%	546	34.74	15.72	41.78	16.34
25%	568	34.74	16.35	41.78	17.00

Electrical characteristics with different rear power gain (reference to 455W)

Temperature Ratings (STC) Operating Parameters

Temperature coefficient (Pmpp)	-0.35%/°C	No. of diodes	3
Temperature coefficient (Isc)	+0.05%/°C	Junction Box IP Rating	IP 68
Temperature coefficient (Voc)	-0.27%/°C	Max. Series Fuse Rating	30A
Nominal Module Operating Temperature (NMOT)	41±2°C	Max. system voltage (IEC/UL)	1500VDC

IV Curve

