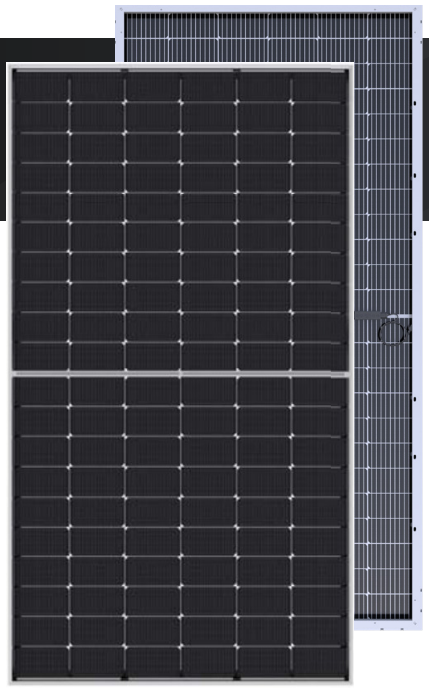
VEGA SERIES™



BIFACIAL I DOUBLE GLASS I PV MODULE

PERC Cell Technology I P-Type

Power Range:	435W I 440W I 445W I 450W I 455W I 460W
Technology:	PERC SE I Half cut cell I 10 Busbar I 120 Cells
Design:	Double Glass I Silver Frame I Glass Back
Module Efficiency:	21.10%
Cell Efficiency:	22.5%~23.3%
Power Tolerance:	0~+5W
System Voltage:	1000/1500 V DC
Module Size:	75.83 x 44.65 x 1.38 in
Module Weight:	61.73 lb
Module Code:	BVM7610M-XXX-H-HC-BF-DG

DESIGNED TO PERFORM AND BUILT TO LAST

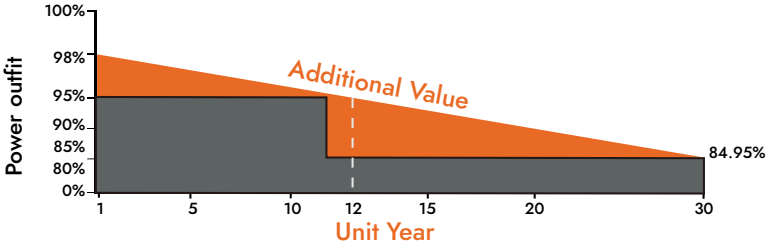
Our PV modules are designed with better technology in mind, made from robust product components, under stringent quality control steps and high-tech manufacturing processes.

PERC, half-cut, multi-busbar, and large cell designs enables our PV modules to pack more power per module, capture more photons, produce more energy, and provide reliable, dependable system performance under different installations requirements, difficult weather, or environmental conditions. Whether you are EPC, installer, contractor, or project developer, we have the right and better PV module for your residential, commercial, industrial, and utility scale solar projects.

- Monocrystalline technology
- P-Type semiconductor
- PERC — Passivated emitter and rear cell technology
- Half-cut cell
- Multi-Busbar cell
- Large wafer design
- Beautiful aesthetic
- Robust product component

WARRANTY

30 - Year linear power warranty
12 - Year product warranty



Output Linear Warranty
Standard Warranty

1 (12) years product warranty
2 Out linear warranty with 2.0% degradation in the 1st year and less than 0.45% degradation each year from 2nd year to 30th year

CERTIFICATES

UL 61730 I IEC 61215 I IEC 61730 I CEC Listed I CE

ISO 9001 Quality Management System

ISO 14001 Environmental Management System

ISO 45001 Occupational Health and Safety Management System

*Please contact with Boviet Solar representatives for full list of certificates according to local requirements and product type

ELECTRICAL CHARACTERISTICS I STC

Maximum Power (Pmax)	435W	440W	445W	450W	455W	460W
Maximum Power Current (Imp)	12.53A	12.60A	12.67A	12.73A	12.79A	12.85A
Maximum Power Voltage (Vmp)	34.78V	34.99V	35.18V	35.41V	35.64V	35.86V
Short Circuit Current (Isc)	13.32A	13.38A	13.45A	13.54A	13.62A	13.74A
Open Circuit Voltage (Voc)	41.21V	41.46V	41.69V	41.96V	42.23V	42.49V
Module Efficiency	19.92%	20.15%	20.37%	20.60%	20.83%	21.06%
Power Tolerance	0~+5W	0~+5W	0~+5W	0~+5W	0~+5W	0~+5W

STC: AM1.5 Irradiance 1000W/m², 25° C

ELECTRICAL CHARACTERISTICS I NOCT

Maximum Power (Pmax)	435W	440W	445W	450W	455W	460W
Maximum Power (Pmax)	329.52W	333.36W	337.03W	340.84W	344.67W	348.43W
Maximum Power Current (Imp)	10.16A	10.22A	10.28A	10.33A	10.37A	10.42A
Maximum Power Voltage (Vmp)	32.42V	32.62V	32.79V	33.01V	33.22V	33.43V
Short Circuit Current (Isc)	10.70A	10.75A	10.81A	10.88A	10.95A	11.04A
Open Circuit Voltage (Voc)	38.61V	38.85V	39.06V	39.31V	39.57V	39.81V

NOCT: AM 1.5 Irradiance 800W/m², 20° C, Wind speed 1m/s

MECHANICAL CHARACTERISTICS

Solar Cell	Monocrystalline I PERC PV Cells 182mm Cell I Half-cut I 10 Busbar I 120 (6x20) pcs in series
Solar Modules	Bifacial I 75.83 x 44.65 x 1.38 in I Weight: 61.73 lb
Module Front Glass	2.0 mm (0.079 inch) High transparency, low iron, AR-coated semi-tempered glass
Module Frame	Frame 35 mm Ultra-strong anodized aluminum alloy frame
Module Junction Box	IP68 rated I 3 bypass diodes
Module Output Cable	4mm² (EU) I 12 AWG (US) 39.38 in
Module Connector	JM608
Module Encapsulant	POE
Module Back Glass	2.0mm thickness, transparent with a grid. High transmitted, low iron, and strength semi-tempered glass
Module Fire Type	Type 29 Fire rated

PACKING INFORMATION

Pieces per pallet:	31 pcs
Pallets per container (40HQ):	24 pallets
Pieces per container (40HQ):	744 pcs
Pallet Weight:	2013.82 lb (914 kg)
Pallet Dimension:	76.81 x 44.69 x 49.49 inch (1952 x 1135 x 1257 mm)

MAXIMUM RATING

Operating Temperature	-40°F~185°F
Maximum Series Fuse Rating	30A
Maximum System Voltage	1000/1500V DC

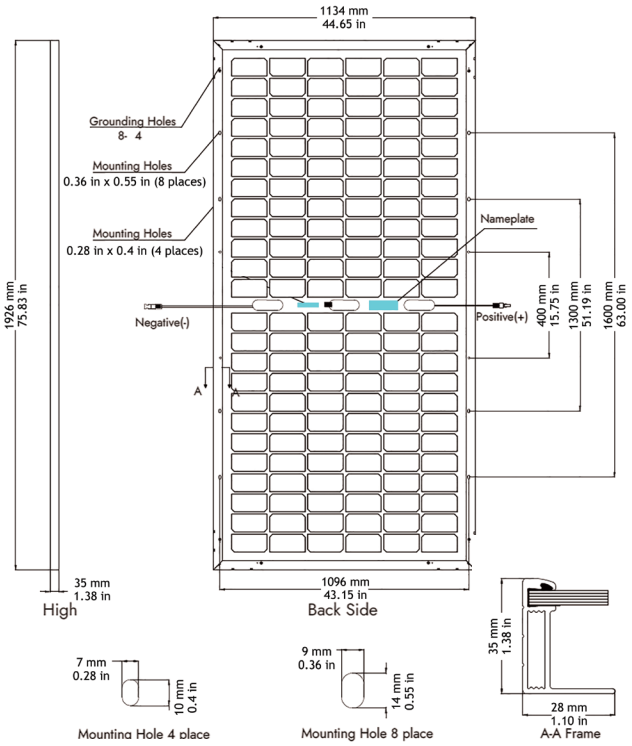
THERMAL CHARACTERISTICS

Pmax Temperature Coefficient	-0.35%/K
Voc Temperature Coefficient	-0.285%/K
Isc Temperature Coefficient	+0.05%/K
NOCT	113±35.6°F

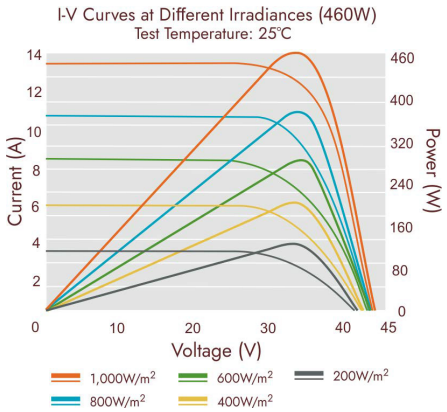
BIFACIAL OUTPUT-BACKSIDE POWER GAIN

10%	Pmax(W)	478.5	484.0	489.5	495.0	500.5	506.0
	Module efficiency (%)	21.91	22.16	22.41	22.66	22.92	23.17
20%	Pmax(W)	522	528	534	540	546	552
	Module efficiency (%)	23.90	24.17	24.45	24.72	25.00	25.27

PV Module: Mechanical Drawing



PV Module: IV Curve



PV Module: IV Curve