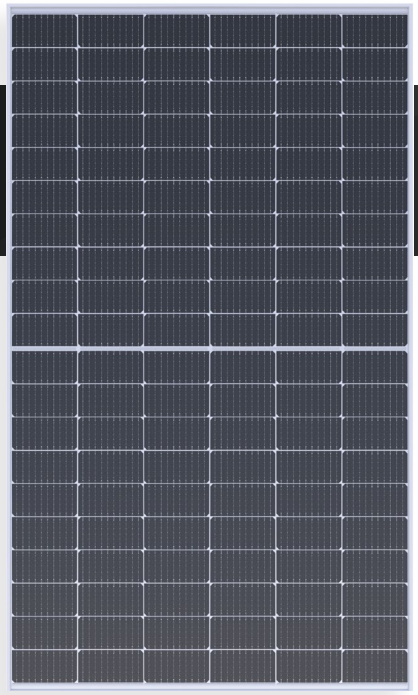
BOVIET SOLAR



GAMMA SERIES™

COMMERCIAL I INDUSTRIAL SOLAR
MONO I MONOFACIAL I PERC I PV MODULE

Power Range:	440W I 445W I 450W I 455W
Technology:	PERC I Half cut cell I 10 Busbar I 120 Cells
Design:	Single Glass I Silver Frame I White Backsheet
Module Efficiency:	20.9%
Cell Efficiency:	22.5%~23.3%
Power Tolerance:	0~+5W
System Voltage:	1000/1500 V DC
Module Size:	75.50 x 44.65 x 1.38 inch.
Module Weight:	52.69 lb.
Module Code:	BVM7610M-XXX-H-HC

DESIGNED TO PERFORM AND BUILT TO LAST

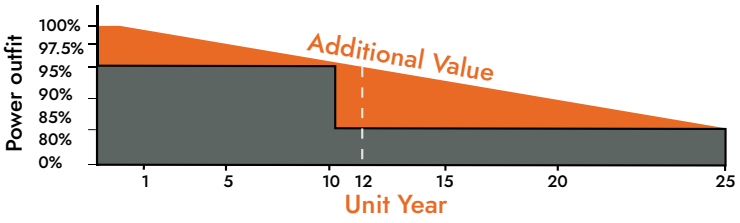
Our PV modules are designed with better technology in mind, made from robust product components, under stringent quality control steps and high-tech manufacturing processes.

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

25- Year linear power warranty
12 -Year product warranty



Output Linear Warranty
Standard Warranty

1 (12) years product warranty

2 Out linear warranty with 2.5% degradation in the 1st year and less than 0.6% degradation each year from 2nd year to 25th 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 representative for Full list of certificates according to local requirements and PV module product type.

ELECTRICAL CHARACTERISTICS I STC

Maximum Power (Pmax)	440W	445W	450W	455W
Maximum Power Current (Imp)	12.60A	12.67A	12.73A	12.79A
Maximum Power Voltage (Vmp)	34.99V	35.18V	35.41V	35.64V
Short Circuit Current (Isc)	13.38A	13.45A	13.54A	13.62A
Open Circuit Voltage (Voc)	41.46V	41.69V	41.96V	42.23V
Module Efficiency	20.2%	20.5%	20.7%	20.9%
Power Tolerance	0~+5W	0~+5W	0~+5W	0~+5W

STC: AM1.5 Irradiance 1000W/m, 25° C

ELECTRICAL CHARACTERISTICS I NOCT

Maximum Power (Pmax)	440W	445W	450W	455W
Maximum Power (Pmax)	328.6W	332.3W	336.1W	339.8W
Maximum Power Current (Imp)	10.09A	10.15A	10.20A	10.24A
Maximum Power Voltage (Vmp)	32.62V	32.80V	33.01V	33.23V
Short Circuit Current (Isc)	10.81A	10.87A	10.94A	11.01A
Open Circuit Voltage (Voc)	38.79V	39.01V	39.26V	39.51V

NOCT: AM 1.5 Irradiance 800/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	Monofacial I 75.50 x 44.65 x 1.38 I Weight: 52.69 lb.
Module Glass	3.2 mm (0.13 inch) High transparency, low iron, AR-coated 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 inch
Module Connector	Multi contact (MC4) compatible connectors
Module Encapsulant	EVA (ethyl vinyl acetate)
Module Backsheet	FFC backsheet
Module Fire Type	Type 1 Fire rated

PACKING INFORMATION

Pieces per pallet:	31
Pallets per container (40HQ):	24
Pieces per container (40HQ):	744
Pallet Weight:	1787.95 lb.
Pallet Dimension:	76.47 x 44.69 x 49.49 inch

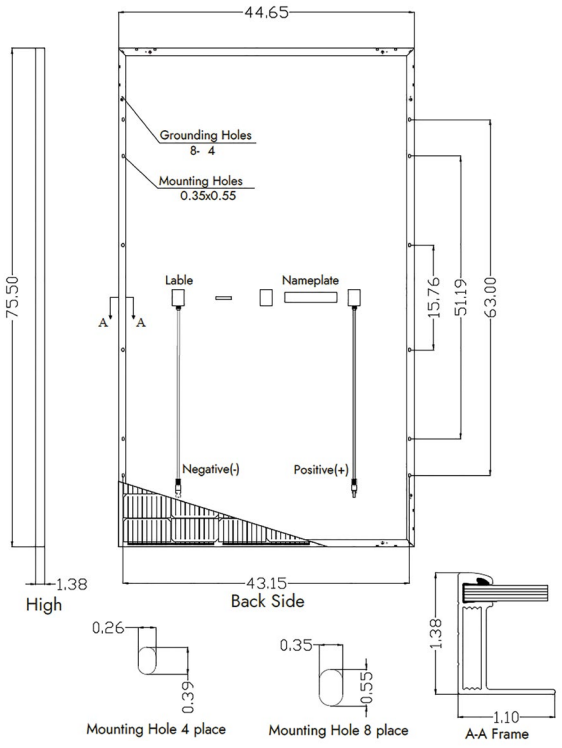
MAXIMUM RATING

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

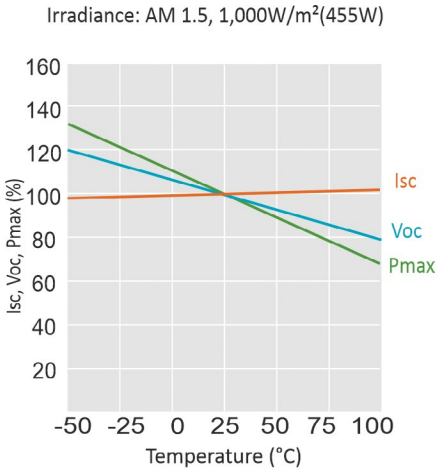
THERMAL CHARACTERISTICS

Pmax Temperature Coefficient	-0.35%/K
Voc Temperature Coefficient	-0.28%/K
Isc Temperature Coefficient	+0.049%/K
NOCT	113±35.6°F

PV Module: Mechanical Drawing



PV Module: IV Curve



PV Module: IV Curve