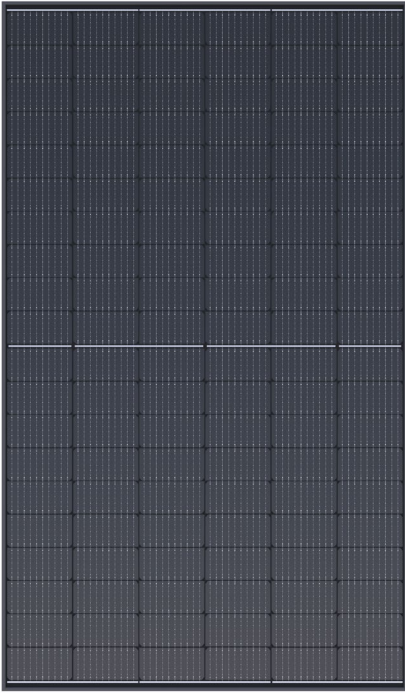


# GAMMA SERIES™

## RESIDENTIAL SOLAR MONO | MONOFACIAL | PERC | PV MODULE



**Power Range:** 430W | 435W | 440W | 445W | 450W  
**Technology:** PERC | Half cut cell | 10 Busbar | 120 Cells  
**Design:** Single Glass | Black Frame | Black Backsheet

**Module Efficiency:** 20.7%  
**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

Passivated emitter and rear cell technology

Half cut cell

Multi-Busbar cell

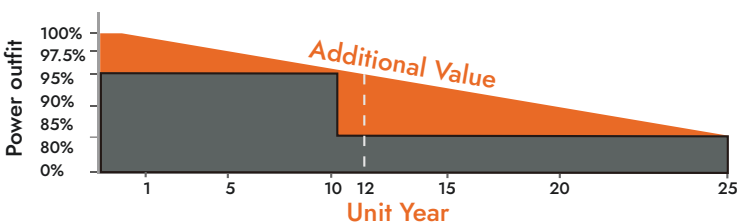
Large wafer design

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 | IEC 61215 | IEC 61730 | CEC Listed | 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 | STC

Maximum Power (Pmax)	430W	435W	440W	445W	450W
Maximum Power Current (Imp)	12.46A	12.53A	12.60A	12.67A	12.73A
Maximum Power Voltage (Vmp)	34.57V	34.78V	34.99V	35.18V	35.41V
Short Circuit Current (Isc)	13.26A	13.32A	13.38A	13.45A	13.54A
Open Circuit Voltage (Voc)	40.97V	41.21V	41.46V	41.69V	41.96V
Module Efficiency	19.8%	20.0%	20.2%	20.5%	20.7%
Power Tolerance	0~+5W	0~+5W	0~+5W	0~+5W	0~+5W

STC: AM1.5 Irradiance 1000W/m<sup>2</sup>, 25° C

## ELECTRICAL CHARACTERISTICS | NOCT

Maximum Power (Pmax)	430W	435W	440W	445W	450W
Maximum Power (Pmax)	321.1W	324.9W	328.6W	332.3W	336.1W
Maximum Power Current (Imp)	9.98A	10.03A	10.09A	10.15A	10.20A
Maximum Power Voltage (Vmp)	32.23V	32.42V	32.62V	32.80V	33.01V
Short Circuit Current (Isc)	10.71A	10.76A	10.81A	10.87A	10.94A
Open Circuit Voltage (Voc)	38.33V	38.56V	38.79V	39.00V	39.26V

NOCT: AM 1.5 Irradiance 800/m<sup>2</sup>, 20° C, Wind speed 1m/s

## MECHANICAL CHARACTERISTICS

Solar Cell	Monocrystalline   PERC PV Cells 182mm Cell   Half-cut   10 Busbar   120 (6x20) pcs in series
Solar Modules	Monofacial   75.50 x 44.65 x 1.38 inch   Weight: 52.69lb.
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 allow frame
Module Junction Box	IP68 rated, 3 bypass diodes
Module Output Cable	4mm <sup>2</sup> (EU) 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:	1743.64 lb.
Pallet Dimension:	76.47 x 44.69 x 49.49 inch

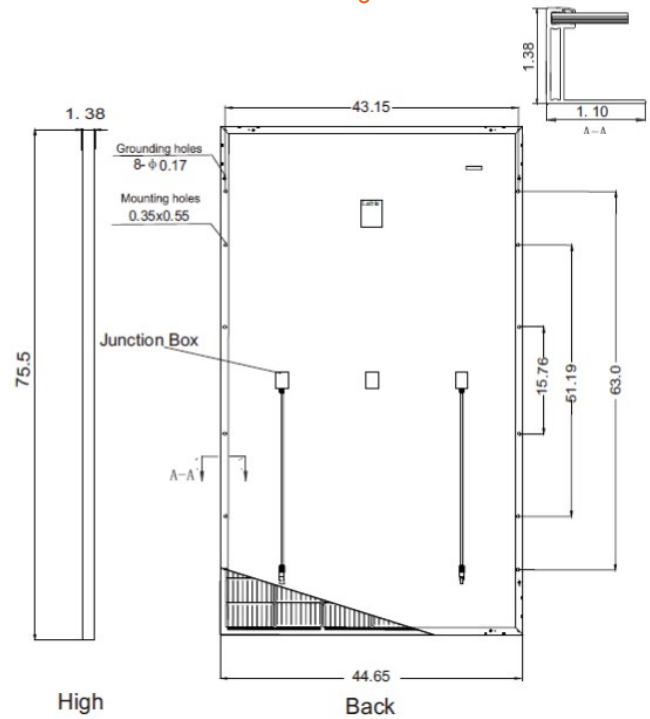
## MAXIMUM RATING

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

## THERMAL CHARACTERISTICS

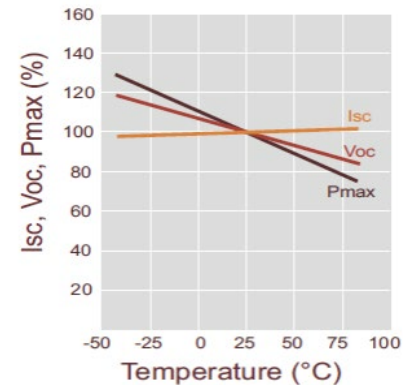
Pmax Temperature Coefficient	-0.35%/K
Voc Temperature Coefficient	-0.28%/K
Isc Temperature Coefficient	+0.049%/K
NOCT	113±35.6°F

## PV Module: Mechanical Drawing



## PV Module: IV Curve

Irradiance: AM 1.5, 1,000W/m<sup>2</sup> (450W)



## PV Module: IV Curve

I-V Curves at Different Irradiances (450W)  
Test Temperature: 25° C

