



## GAMMA SERIES™

### UTILITY SCALE SOLAR

### MONO | MONOFACIAL | PERC | PV MODULE

Power Range: 405W | 410W | 415W | 420W | 425W  
Technology: PERC | Cut cell | 12 Busbar | 305 Cells  
Design: Single Glass | Black Frame | White Backsheet

Module Efficiency: 21.4%  
Cell Efficiency: 22.5%~23.3%  
Power Tolerance: 0~+5W  
System Voltage: 1500 V DC


Module Size: 1812 x 1096 x 30 mm  
Module Weight: 20.8 kg  
Module Code: BVMXXXTM-305H


## 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, cell-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

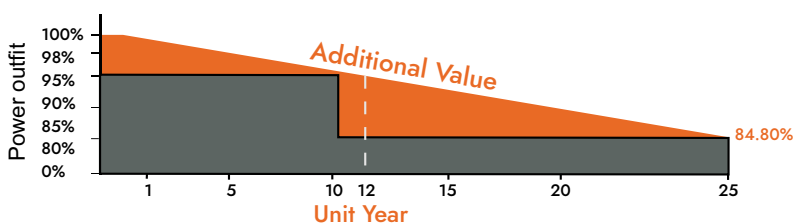
 Large wafer design

 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

IEC 61215 | IEC 61730 | 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)	405W	410W	415W	420W	425W
Maximum Power Current (Imp)	11.82A	11.93A	12.08A	12.19A	12.30A
Maximum Power Voltage (Vmp)	34.3V	34.4V	34.4V	34.5V	34.6V
Short Circuit Current (Isc)	12.53A	12.65A	12.80A	12.93A	13.03A
Open Circuit Voltage (Voc)	41.3V	41.4V	41.5V	41.6V	41.7V
Module Efficiency	20.4%	20.6%	20.9%	21.1%	21.4%
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)	405W	410W	415W	420W	425W
Maximum Power (Pmax)	305W	309W	312W	316W	320W
Maximum Power Current (Imp)	9.33A	9.41A	9.53A	9.62A	9.70A
Maximum Power Voltage (Vmp)	32.7V	32.8V	32.8V	32.9V	33.0V
Short Circuit Current (Isc)	10.09A	10.19A	10.31A	10.41A	10.50A
Open Circuit Voltage (Voc)	39.4V	39.5V	39.6V	39.7V	39.8V

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

## MECHANICAL CHARACTERISTICS

Solar Cell	Monocrystalline I PERC PV Cells 210mm Cell I12 Busbar I 305 (61x5) pcs in series
Solar Modules	Monofacial I 1812 x 1096 x 30mm I Weight: 20.8kg
Module Glass	3.2 mm (0.13 inch) High transparency, low iron, AR-coated tempered glass
Module Frame	Frame 30 mm Anodized aluminum profile
Module Junction Box	Ip68 rated I 2 bypass diodes
Module Output Cable	4mm <sup>2</sup> , +300mm/-1000mm(V),+220mm/-180mm(H)
Module Connector	Multi contact (MC4) compatible connectors
Module Encapsulant	EVA (ethyl vinyl acetate)
Module Backsheet	FFC backsheet
Module Fire Type	Class C

## PACKING INFORMATION

Pieces per pallet:	36
Pallets per container (40HQ):	24
Pieces per container (40HQ):	864

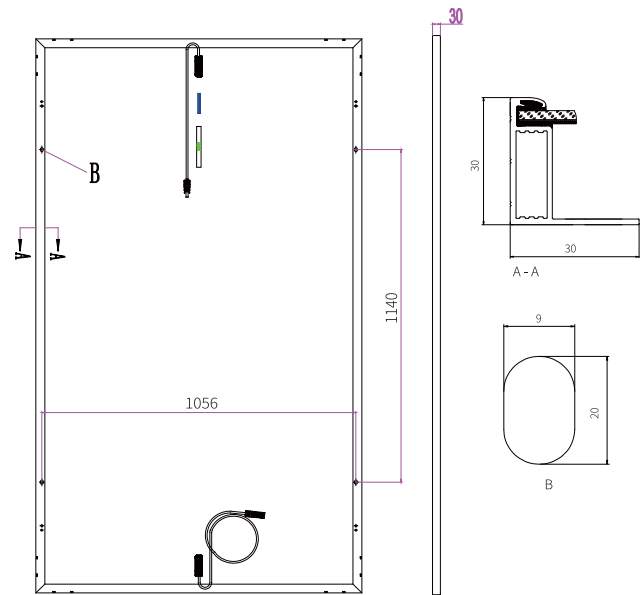
## MAXIMUM RATING

Operating Temperature	-40~+85°C
Maximum Series Fuse Rating	25A
Isc Temperature Coefficient	1500V DC

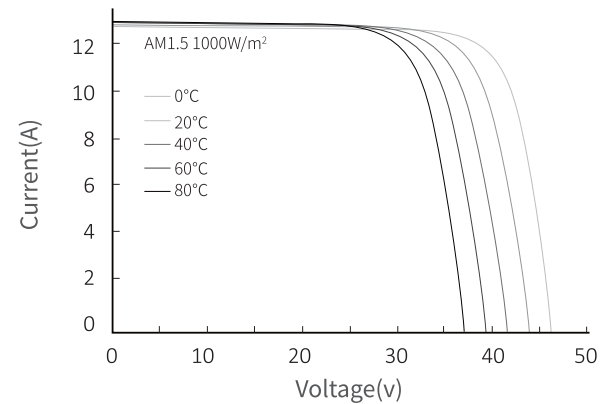
## THERMAL CHARACTERISTICS

Pmax Temperature Coefficient	-0.34%/°C
Voc Temperature Coefficient	-0.27%/°C
Isc Temperature Coefficient	+0.04%/°C
NOCT	42.3±2°C

## PV Module: Mechanical Drawing



## PV Module: IV Curve



## PV Module: IV Curve

