







BSM440PMB7-46SC
420-440W
SHINGLED PERC

Features

- 
Shingled Technology
 Innovative structure with low-temperature adhesive bonding and a high-density layout.
- 
Beautiful Apperance
 Deep black, uniform layout for enhanced aesthetics.
- 
Compact Design
 Up to 440 Wp output within 2 m².
- 
Low System Cost
 High module efficiency, reducing system cost.
- 
Low Shading Loss
 Full parallel arrangement maximizes effective power generation hours.
- 
The ideal solution for:
 Rooftop arrays on residential buildings.

PERFORMANCE WARRANTY

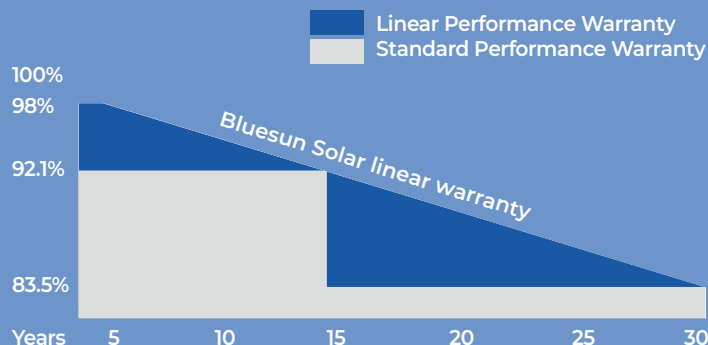
15year
Quality Warranty

30year
Performance Warranty

0.55%

Annual Degradation Over 30 years no more than 0.55%

Founded in 2004, Bluesun is a leading photovoltaic manufacturer dedicated to the research, development, and production of crystalline silicon solar cells and modules for 17 years. The company has sales in over 100 countries and regions worldwide, with cumulative historical shipments exceeding 12 GW.



*According to the applicable Bluesun Solar Limited Warranty Statement.

MANAGEMENT SYSTEM CERTIFICATES

ISO 9001:2015 / Quality management system

ISO 14001:2015 / Standards for environmental

ISO 45001: 2018 / International standards for occupational health & safety

PRODUCT CERTIFICATES

IEC 61215 / IEC 61730 / CE



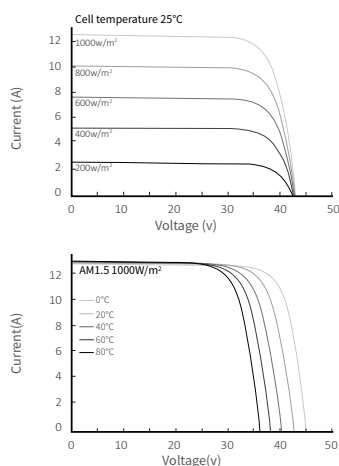
SPECIFICATIONS

| Module Type | BSM420PMB7-46SC | | BSM425PMB7-46SC | | BSM430PMB7-46SC | | BSM435PMB7-46SC | | BSM440PMB7-46SC | |
|--|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|
| | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT |
| Maximum Power (P _{max} /W) | 420 | 316 | 425 | 320 | 430 | 324 | 435 | 328 | 440 | 332 |
| Operating Voltage (V _{mp} /V) | 34.5 | 32.9 | 34.6 | 33.0 | 34.7 | 33.1 | 34.8 | 33.2 | 34.9 | 33.3 |
| Operating Current (I _{mp} /A) | 12.19 | 9.62 | 12.30 | 9.70 | 12.39 | 9.79 | 12.50 | 9.88 | 12.60 | 9.97 |
| Open-Circuit Voltage (V _{oc} /V) | 41.6 | 39.7 | 41.7 | 39.8 | 41.8 | 39.9 | 41.9 | 40.0 | 42.0 | 40.1 |
| Short-Circuit Current (I _{sc} /A) | 12.92 | 10.41 | 13.03 | 10.50 | 13.14 | 10.60 | 13.26 | 10.71 | 13.37 | 10.82 |
| Module Efficiency η (%) | 21.1 | | 21.4 | | 21.7 | | 21.9 | | 22.2 | |

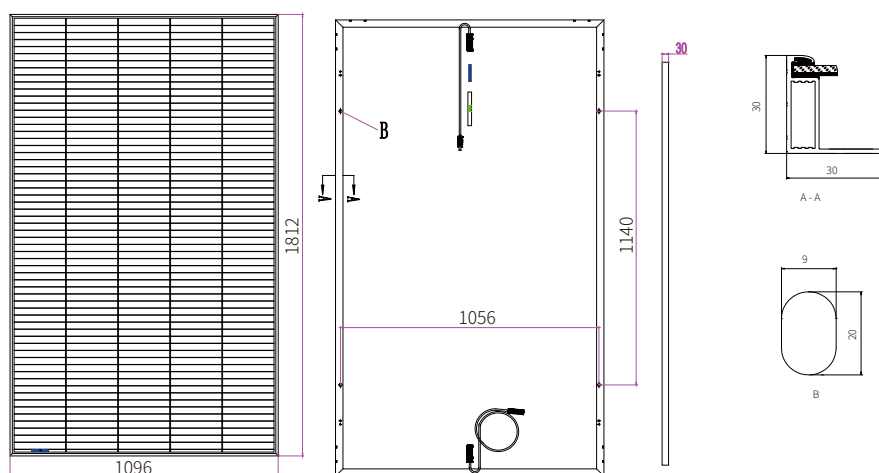
STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5

NMOT: Irradiance at 800W/m², Ambient Temperature 20°C, Air Mass AM 1.5, Wind Speed 1m/s

I-V CURVE



ENGINEERING DRAWINGS



MECHANICAL SPECIFICATION

| | |
|--------------------------|---|
| Cell Type | Mono-crystalline solar cell |
| Weight | 21.2kg |
| Module Dimensions | 1812*1096*30mm |
| Cable Length | +300mm/-1000(Vertical) +220mm/-180mm(Horizontal) |
| Cable Cross Section Size | TUV: 4mm ² (0.006inches ²)/UL: 12AWG |
| Front Glass | 3.2mm (0.13inches) AR Coating Tempered Glass |
| No. of Bypass Diodes | 2 |
| Packing Configuration | 36pcs/carton, 924pcs/40hq |
| Frame | Anodized Aluminium Alloy |
| Junction Box | IP68 |

OPERATING CONDITIONS

| | |
|------------------------|--|
| Maximum System Voltage | 1500/1000V DC(IEC) |
| Operating Temperature | -40°C~ +85°C |
| Maximum Series Fuse | 25A |
| Static Loading | Snow Loading: 5400Pa/ Wind Loading: 2400Pa |
| Conductivity at Ground | ≤0.1Ω |
| Safety Class | II |
| Resistance | ≥100MΩ |
| Connector | T01/LJQ-3-CSY/MC4/MC4-EVO2 |

TEMPERATURE COEFFICIENT

| | |
|--|-----------|
| Temperature Coefficient P _{max} | -0.34%/°C |
| Temperature Coefficient V _{oc} | -0.27%/°C |
| Temperature Coefficient I _{sc} | +0.04%/°C |
| NMOT | 42.3±2°C |

*Data contained in these specifications is subject to change without notice. Bluesun Solar reserves the right to final interpretation of content.