

108  
**HEX7**

# BSM440M10-54HNH 425-445W

**HALF CELL TOPCON  
BIFACIAL**

## BLUESUN SOLAR CO.,LTD

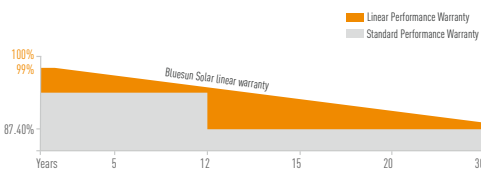
Bluesun, founded in 2004, as a superior photovoltaic manufacturer, is devoted to the R&D and the production of crystalline silicon solar cells and modules for 17 years. The company has its sales areas spread all over more than 100 countries and regions in the world, and the cumulative historical shipments exceeded 12 GW.

## PERFORMANCE WARRANTY

**12** Enhanced Product Warranty on Materials and Workmanship.

**30** Linear Power Performance Warranty\*

**0.4** Annual Degradation Over 30 years no more than 0.4%



\*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 / TUV



## THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings



Ground-mounted solar power plants



### High module conversion efficiency

MBB Half Cell Technology, Module efficiency up to 22.53%



### Withstanding harsh environment

Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline



### PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control



### Excellent weak light performance

More power output in weak light condition, such as cloudy, morning and sunset



### Extended wind and snow load tests

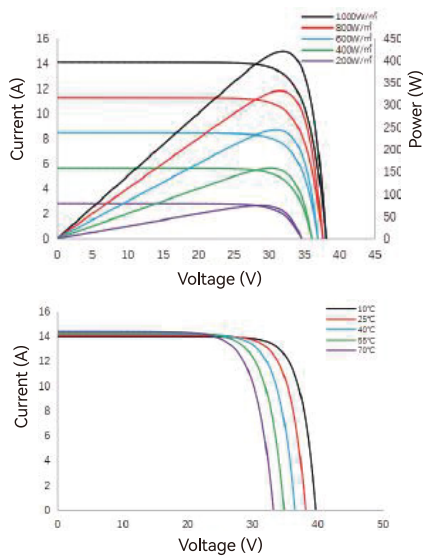
Module certified to withstand extreme wind (2400 Pa) and snow loads (5400 Pa)

## SPECIFICATIONS

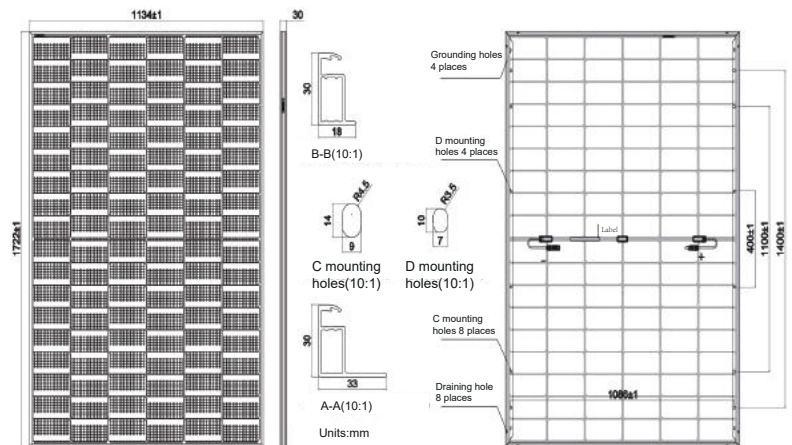
| Module Type                    | BSM425M10-54HNNH | BSM430M10-54HNNH | BSM435M10-54HNNH | BSM440M10-54HNNH | BSM445M10-54HNNH |
|--------------------------------|------------------|------------------|------------------|------------------|------------------|
|                                | STC              | STC              | STC              | STC              | STC              |
| Maximum Power (Pmax/W)         | 425              | 430              | 435              | 440              | 445              |
| Operating Voltage (Vmp/V)      | 31.69            | 31.87            | 32.06            | 32.25            | 32.44            |
| Operating Current (Imp/A)      | 13.42            | 13.50            | 13.58            | 13.66            | 13.74            |
| Open-Circuit Voltage (Voc/V)   | 38.29            | 38.48            | 38.67            | 38.86            | 39.05            |
| Short-Circuit Current (Isc/A)  | 14.16            | 14.24            | 14.32            | 14.40            | 14.48            |
| Module Efficiency $\eta_m(\%)$ | 21.76            | 22.02            | 22.28            | 22.53            | 22.79            |

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 NMOT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Air Mass AM1.5, Wind Speed 1m/s

## I-V CURVE



## ENGINEERING DRAWINGS



## MECHANICAL SPECIFICATION

|                          |   |
|--------------------------|---|
| Cell Type                | N-type Topcon   |
| Cell Arrangement         | 108 (6*18)  |
| Weight                   | 22.0kg  |
| Module Dimensions        | 1722*1134*30mm  |
| Cable Length             | +400mm, -200mm or ± 1200mm, length can be customized        |
| Cable Cross Section Size | TUV: 4mm <sup>2</sup> (0.006inches <sup>2</sup> )/UL: 12AWG |
| Front Glass              | 2.0mm high transmittance, AR coated tempered Glass          |
| Rear Glass               | 2.0mm high transmittance, coated tempered Glass             |
| No. of Bypass Diodes     | 3   |
| Packing Configuration    | 36pcs/carton, 936pcs/40hq                                   |
| Frame                    | Anodized Aluminium Alloy                                    |
| Junction Box             | IP68  |

## OPERATING CONDITIONS

|                        |  |
|------------------------|--|
| Maximum System Voltage | 1500V DC(IEC)                              |
| Operating Temperature  | -40°C~ +85°C                               |
| Maximum Series Fuse    | 30A  |
| 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 Pmax | -0.30%/°C  |
| Temperature Coefficient Voc  | -0.25%/°C  |
| Temperature Coefficient Isc  | +0.046%/°C |
| NMOT                         | 45±2°C     |

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