

# HPBC 2.0

## BIFACIAL MODULE

### BSM480M10-54HJB

### 470-485W

#### BLUESUN SOLAR CO.,LTD

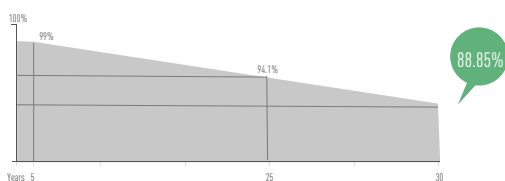
Bluesun, founded in 2004, as a superior photovoltaic manufacturer, is devoted to the R&D and the production of crystalline silicon solar cells and modules for 17 years. The company has its sales areas spread all over more than 100 countries and regions in the world, and the cumulative historical shipments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

#### PERFORMANCE WARRANTY

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

**30** Linear Power Performance Warranty\*

**0.35** Annual Degradation Over 30 years no more than 0.35%



\*According to the applicable Bluesun Solar Limited Warranty Statement.





#### THE FEATURES:

- Suitable for Distribution Market
- Peak efficiency with top power generation performance
- TaiRay wafer & BC technology enhances high product reliability
- More suitable for industrial and commercial cement roofs and high temperature scenarios

#### MANAGEMENT SYSTEM CERTIFICATES

ISO 9001:2015 / Quality management system  
 ISO 14001:2015 / Standards for environmental  
 ISO 45001: 2018 / International standards for occupational health & safety

#### MORE ADVANTAGES:

-  High efficiency cell: 23.8%
-  No ribbon on the front  
Enhance oblique light absorption
-  Back contact welding structure  
Lower cells stress
-  Low irradiation environment with high power generation performance

#### PRODUCT CERTIFICATES

IEC 61215 / IEC 61730 / CE



## SPECIFICATIONS

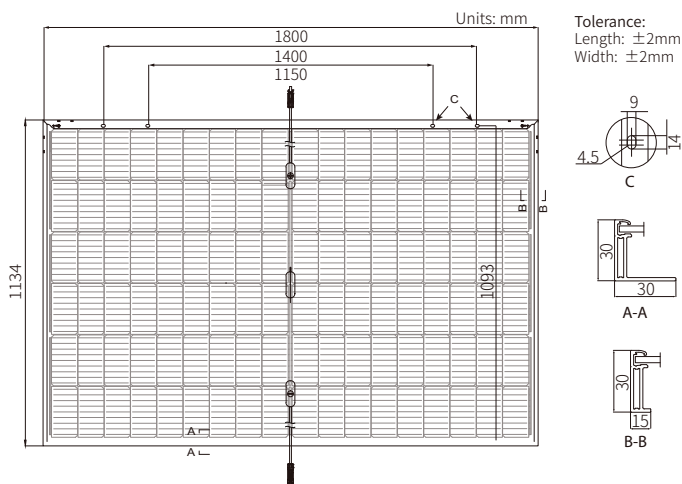
Module Type	BSM470M10-54HJB		BSM475M10-54HJB		BSM480M10-54HJB		BSM485M10-54HJB	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (P <sub>max</sub> /W)	470	357	475	361	480	365	485	369
Operating Voltage (V <sub>mp</sub> /V)	33.29	31.60	33.40	31.71	33.51	31.82	33.62	31.93
Operating Current (I <sub>mp</sub> /A)	14.13	11.30	14.23	11.39	14.33	11.48	14.43	11.56
Open-Circuit Voltage (V <sub>oc</sub> /V)	40.31	38.28	40.42	38.39	40.53	38.50	40.64	38.61
Short-Circuit Current (I <sub>sc</sub> /A)	14.78	11.84	14.88	11.93	14.98	12.02	15.08	12.10
Module Efficiency η <sub>m</sub> (%)	23.0		23.3		23.5		23.8	

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

## Electrical characteristics with different rear side power gain (refer to 470W front)

Power Gain	5%	10%	15%	20%	25%
Maximum Power (P <sub>max</sub> /W)	494	517	541	564	588
Open-Circuit Voltage (V <sub>oc</sub> /V)	40.31	40.31	40.41	40.41	40.41
Operating Voltage (V <sub>mp</sub> /V)	33.29	33.29	33.39	33.39	33.39
Short-Circuit Current (I <sub>sc</sub> /A)	15.52	16.26	17.00	17.74	18.48
Operating Current (I <sub>mp</sub> /A)	14.82	15.53	16.19	16.89	17.60

## ENGINEERING DRAWINGS



## MECHANICAL SPECIFICATION

Cell Type	HPBC 2.0
Cell Arrangement	108 (6*18)
Weight	23.5kg
Module Dimensions	1800*1134*30mm
Cable Length	±1200mm/customizable
Cable Cross Section Size	TUV: 4mm <sup>2</sup> (0.006inches <sup>2</sup> )/UL: 12AWG
Front Glass	2.0mm coated semi tempered glass
Back Glass	2.0mm semi-tempered glass
No. of Bypass Diodes	3
Packing Configuration	36pcs/carton, 864pcs/40hq
Frame	Anodized Aluminium Alloy
Junction Box	IP68
Connector	MC4/MC4-EVO2

## OPERATING CONDITIONS

Maximum System Voltage	DC1500V(IEC)
Operating Temperature	-40°C~ +85°C
Maximum Series Fuse	30A
Static Loading	Snow Loading: 5400Pa/ Wind Loading: 2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s
Safety Class	II
Fire Rating	Glass C
Backside Output Ratio*	70%±5%
*Under STC: Backside Output Ratio = P <sub>max</sub> (rear) / P <sub>max</sub> (front)	

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

## TEMPERATURE COEFFICIENT

Temperature Coefficient P <sub>max</sub>	-0.260%/°C
Temperature Coefficient V <sub>oc</sub>	-0.200%/°C
Temperature Coefficient I <sub>sc</sub>	+0.050%/°C
NMOT	45±2°C