




**BLACK**  
MONOFACIAL MODULE

# BSM480PM5-78SA

**470~490W**  
**N-type SHINGLED**

## BLUESUN SOLAR CO.,LTD

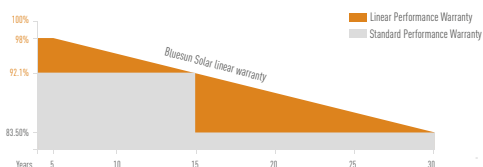
Bluesun, founded in 2004, as a superior photovoltaic manufacturer, is devoted to the R&D and the production of crystalline silicon solar cells and modules for 17 years. The company has its sales areas spread all over more than 100 countries and regions in the world, and the cumulative historical shipments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

## PERFORMANCE WARRANTY

**15** Enhanced Product Warranty on Materials and Workmanship

**30** Linear Power Performance Warranty\*

**0.55%** Annual Degradation Over 30 years no more than 0.55%



\*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



## THE IDEAL SOLUTION FOR:

 Rooftop arrays on residential buildings

 Ground-mounted solar power plants



### Shingled Technology

Innovative structure, low -temperature adhesive bonding, high-density layout



### Lower LID

N-type with lower LID



### Beautiful Appearance

Deep black, uniform layout, better aesthetic



### Compact Design

Upto 440Wp output within 2m<sup>2</sup> perfect for residential rooftop



### Low System Cost

High module efficiency, reducing system cost



### Low Shading Loss

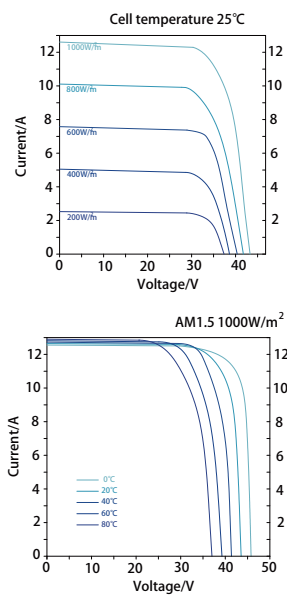
Full parallel arrangement brings high effective power generation hours

## SPECIFICATIONS

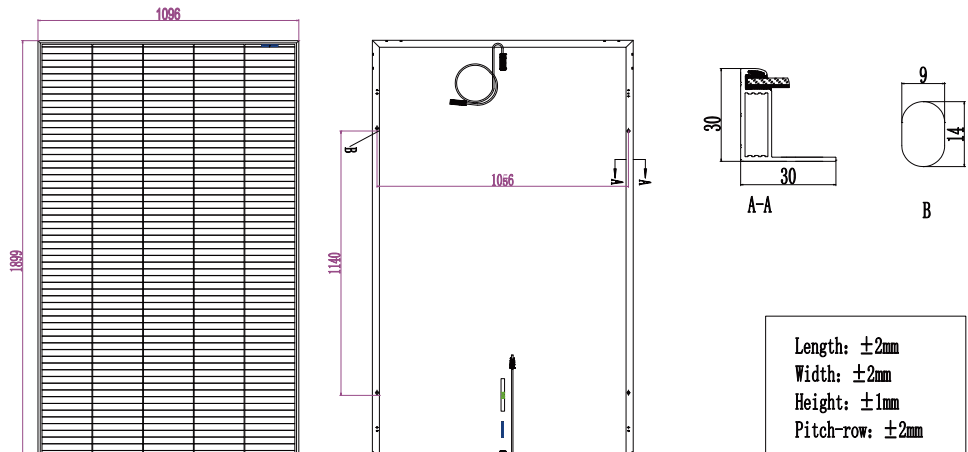
Module Type	BSM470PM5-78SA		BSM475PM5-78SA		BSM480PM5-78SA		BSM485PM5-78SA		BSM490PM5-78SA	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	470	355	475	359	480	363	485	367	490	371
Operating Voltage (Vmp/V)	36.90	35.20	37.00	35.30	37.10	35.40	37.20	35.50	37.30	35.60
Operating Current (Imp/A)	12.74	10.09	12.84	10.17	12.95	10.26	13.05	10.34	13.15	10.43
Open-Circuit Voltage (Voc/V)	44.30	42.30	44.40	42.40	44.50	42.50	44.60	42.60	44.70	42.70
Short-Circuit Current (Isc/A)	13.56	10.95	13.67	11.04	13.78	11.13	13.89	11.22	13.99	11.31
Module Efficiency $\eta$ (%)	22.60		22.80		23.10		23.30		23.50	

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 monocrystalline
Weight	21.8kg
Module Dimensions	1899*1096*30mm
Cable Length	+500mm/-1100(Vertical) +250mm/-150mm(Horizontal)
Cable Cross Section Size	TUV: 4mm <sup>2</sup> (0.006inches <sup>2</sup> )/UL: 12AWG
Front Glass	3.2mm (0.13inches) AR Coating Tempered Glass
No. of Bypass Diodes	3
Packing Configuration	36pcs/carton, 864pcs/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	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 Pmax	-0.34%/°C
Temperature Coefficient Voc	-0.27%/°C
Temperature Coefficient Isc	+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.