



# JET

## BSM450M10-54NHS

### 435~450W

#### N-TYPE TOPCON

#### BLUESUN SOLAR CO.,LTD

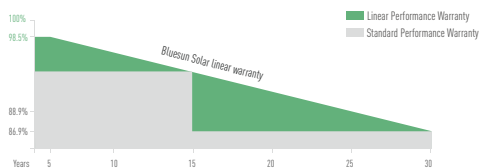
Bluesun, founded in 2004, as a superior photovoltaic manufacturer, is devoted to the R&D and the production of crystalline silicon solar cells and modules for 17 years. The company has its sales areas spread all over more than 100 countries and regions in the world, and the cumulative historical shipments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

#### PERFORMANCE WARRANTY

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

**30** Linear Power Performance Warranty\*

**0.40%** Annual Degradation Over 30 years no more than 0.40%



\*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:



High efficiency cell: 25%+



Multi angle incidence, unshielded absorption

No ribbon on the front

Enhance oblique light absorption



Innovative welding technology protects JET cells

Back contact welding structure

Lower cells stress



Lower degradation

First year degradation < 1.5%/year

2-30 degradation 0.4%



Resilient in high temperatures

Power temperature coefficient as low as -0.29% / °C

Ensure stable power generation in hot conditions



Better low irradiation performance

Low irradiation environment with high power generation performance

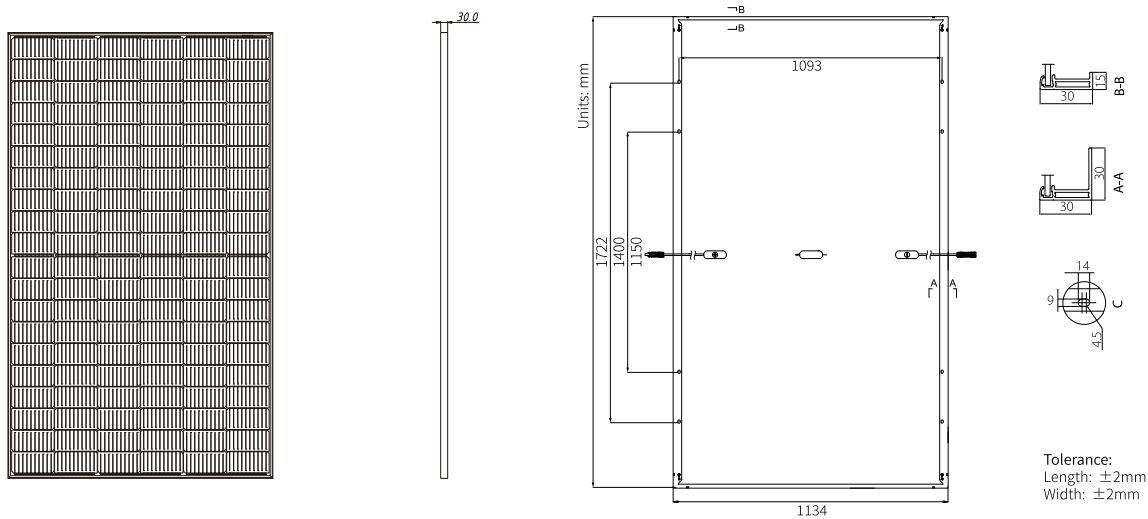
## SPECIFICATIONS

Module Type		BSM435M10-54NHS		BSM440M10-54NHS		BSM445M10-54NHS		BSM450M10-54NHS	
		STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power	(Pmax/W)	435	325	440	329	445	332	450	336
Operating Voltage	(Vmp/V)	33.04	30.15	33.24	30.33	33.44	30.51	33.64	30.70
Operating Current	(Imp/A)	13.17	10.78	13.24	10.85	13.31	10.90	13.38	10.95
Open-Circuit Voltage	(Voc/V)	39.33	36.93	39.53	37.11	39.73	37.30	39.93	37.49
Short-Circuit Current	(Isc/A)	14.22	11.49	14.30	11.55	14.37	11.61	14.45	11.67
Module Efficiency	ηm(%)	22.3		22.5		22.8		23.0	

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

## ENGINEERING DRAWINGS



## MECHANICAL SPECIFICATION

Cell Type	High efficiency N-type Topcon
Cell Arrangement	108 (6*18)
Weight	20.8kg
Module Dimensions	1722*1134*30mm
Cable Length	300mm or 1200mm
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, 936pcs/40hq(EU),828pcs/40hq(USA)
Frame	Anodized Aluminium Alloy
Junction Box	IP68

## OPERATING CONDITIONS

Maximum System Voltage	DC1500V(IEC)
Operating Temperature	-40°C~ +85°C
Maximum Series Fuse	25A
Static Loading	Snow Loading: 5400Pa/ Wind Loading: 2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s
Safety Class	II
Fire Rating	Class C

## TEMPERATURE COEFFICIENT

Temperature Coefficient Pmax	-0.290%/°C
Temperature Coefficient Voc	-0.230%/°C
Temperature Coefficient Isc	+0.050%/°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.