

108
HEX7

BSM450M10-54HNH 425-450W

**HALF CELL TOPCON
BIFACIAL**

BLUESUN SOLAR CO.,LTD

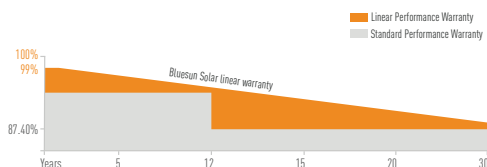
Bluesun, founded in 2004, as a superior photovoltaic manufacturer, is devoted to the R&D and the production of crystalline silicon solar cells and modules for 17 years. The company has its sales areas spread all over more than 100 countries and regions in the world, and the cumulative historical shipments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

PERFORMANCE WARRANTY

25 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 / CE



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 23.04%



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

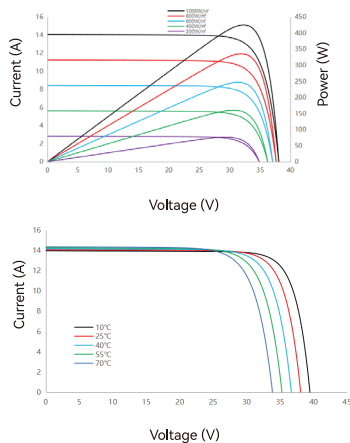
Module Type	BSM425M10-54HNH		BSM430M10-54HNH		BSM435M10-54HNH		BSM440M10-54HNH		BSM445M10-54HNH		BSM450M10-54HNH	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (P _{max} /W)	425	320	430	324	435	328	440	332	445	336	450	340
Operating Voltage (V _{mp} /V)	31.69	29.5	31.87	29.66	32.06	29.82	32.25	29.98	32.44	30.14	32.63	30.30
Operating Current (I _{mp} /A)	13.42	10.85	13.50	10.92	13.58	11.00	13.66	11.08	13.74	11.16	13.82	11.24
Open-Circuit Voltage (V _{oc} /V)	38.29	36.40	38.48	36.56	38.67	36.72	38.86	36.88	39.05	37.04	39.24	37.20
Short-Circuit Current (I _{sc} /A)	14.16	11.43	14.24	11.49	14.32	11.55	14.40	11.61	14.48	11.67	14.56	11.73
Module Efficiency η _m (%)	21.76		22.02		22.28		22.53		22.79		23.04	

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5NMOT: Irradiance at 800W/m², Ambient Temperature 20°C, Air Mass AM1.5, Wind Speed 1m/s

Electrical characteristics with different rear side power gain (refer to 425W front)

Power Gain	5%	10%	15%	20%	25%
Maximum Power (P _{max} /W)	446	468	489	510	531
Open-Circuit Voltage (V _{oc} /V)	38.29	38.29	38.29	38.39	38.39
Operating Voltage (V _{mp} /V)	32.12	32.12	32.12	32.13	32.13
Short-Circuit Current (I _{sc} /A)	14.59	15.15	15.69	16.25	16.81
Operating Current (I _{mp} /A)	13.89	14.58	15.23	15.88	16.53

I-V CURVE



ENGINEERING DRAWINGS

