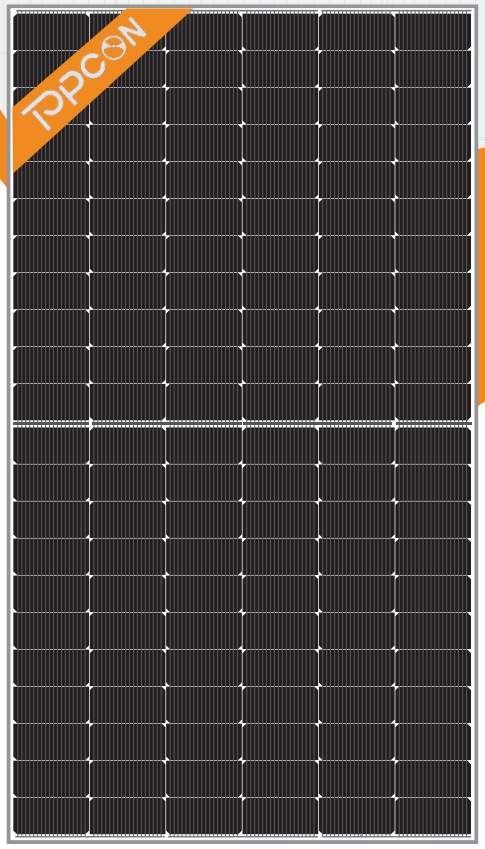
SOLAR BLUESUN
Your Best PV Supplier

www.bluesunpv.com



132 HEX7

BSM650G12-60HNH
635-655W

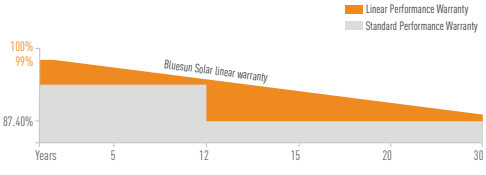
HALF CELL TOPCON
BIFACIAL

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 Years — Enhanced Product Warranty on Materials and Workmanship.
- 30 Years — 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 / 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 24.25%

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)

BLUESUN SOLAR CO.,LTD
Tel:+86 (158) 5821 3997
Fax:+86 (551) 6565 2651
E-mail:info@bluesunpv.com
Add:Innovations Tower, No.679 West WangJiang Road, Hi-tech Zone Hefei 230031 China

*Release BSMXXG12-60HNH(635-655W)-2025-03-Rev01-EN

SPECIFICATIONS

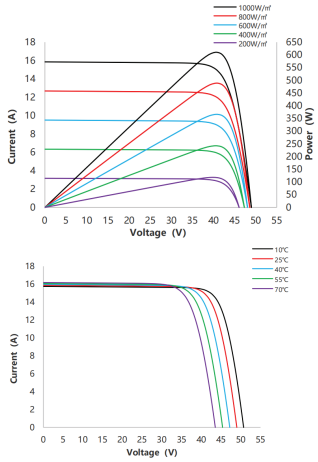
Module Type		BSM635G12-60HNH		BSM640G12-60HNH		BSM645G12-60HNH		BSM650G12-60HNH		BSM655G12-60HNH	
		STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power	(Pmax/W)	635	481	640	485	645	489	650	493	655	497
Operating Voltage	(Vmp/V)	43.10	40.63	43.23	40.80	43.36	40.97	43.49	41.14	43.62	41.31
Operating Current	(Imp/A)	14.73	11.84	14.80	11.89	14.88	11.94	14.95	11.98	15.02	12.03
Open-Circuit Voltage	(Voc/V)	52.62	50.02	52.82	50.21	53.02	50.40	53.22	50.59	53.42	50.78
Short-Circuit Current	(Isc/A)	15.35	12.47	15.41	12.53	15.47	12.59	15.53	12.65	15.59	12.71
Module Efficiency	ηm(%)	23.51		23.69		23.88		24.06		24.25	

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

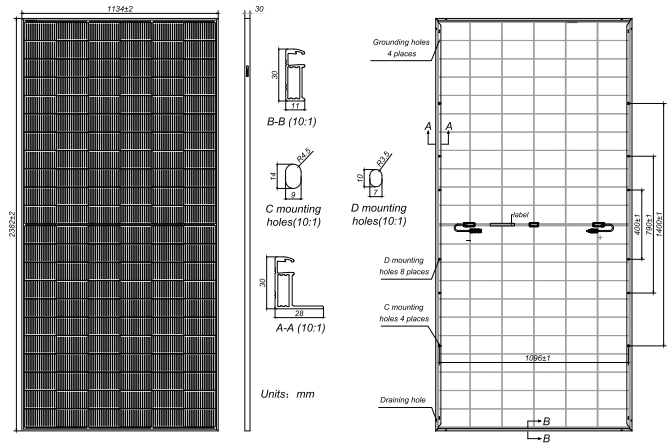
Electrical characteristics with different rear side power gain

5%	Maximum Power (Pmax/W)	667	672	677	683	688
	Module Efficiency (η/%)	24.68	24.88	25.07	25.27	25.46
15%	Maximum Power (Pmax/W)	730	736	742	748	753
	Module Efficiency (η/%)	27.03	27.25	27.46	27.67	27.89
25%	Maximum Power (Pmax/W)	794	800	806	813	819
	Module Efficiency (η/%)	29.39	29.62	29.85	30.08	30.31

I-V CURVE



ENGINEERING DRAWINGS



MECHANICAL SPECIFICATION

Cell Type	N-type Topcon
Cell Arrangement	132 (6*22)
Weight	32.5kg
Module Dimensions	2382*1134*30mm
Cable Length	+400mm, -200mm or ± 1200mm, length can be customized
Cable Cross Section Size	TUV: 4mm²(0.006inches²)/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, 720pcs/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
Safety Class	II
Connector	T01/LJQ-3-CSY/MC4/MC4-EVO2
Backside Output Ratio* *Under STC: Backside Output Ratio = Pmax(rear) /Pmax(front)	80%±10%

TEMPERATURE COEFFICIENT

Temperature Coefficient Pmax	-0.29%/°C
Temperature Coefficient Voc	-0.26%/°C
Temperature Coefficient Isc	+0.045%/°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.

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