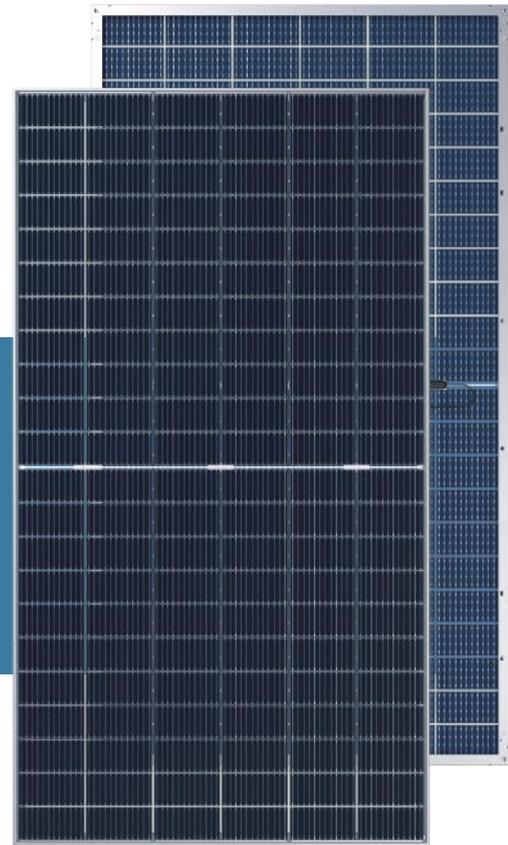


BiDrive UltraMax Series TSBHM-132HSG 645-655

Ultra High Efficiency Bifacial Mono PERC Half-cell Solar Module (210)



ABOUT BEYONDSUN

Founded in 2008, Beyondsun is the world's leading PV manufacturer and one-stop solution provider. With multiple manufacturing bases and more than 8 branches around the world, our business covers cells, modules, aluminum frame and PV projects. With its advantages of continuous technological innovation, strong financial performance, and well-established global sales and service networks, Beyondsun has been highly recognized by its global partners. Until now, Beyondsun has distributed more than 8 GW PV products to over 30 countries all over the world. We are committed to collaborate with our partners in driving renewable energy together.



ULTRA HIGH MODULE EFFICIENCY

More power output with 210 MBB mono PERC half-cut cell



MORE ENERGY YIELD

Bifacial cell, additional 5%-30% more energy yield from rear side



LOWER OPERATING TEMPERATURE, MORE RELIABLE

Lower operating temperature and hot spot temperature during the sunny day, making the module prevail during the sunny days



BETTER SHADING TOLERANCE

Thanks to paralleling circuit design, more power generated under shading condition and during morning & evening time



BETTER MICRO CRACK RESISTANCE

Minimize the impact by micro crack by limiting cell damage and potentially extending area by half-cut module architecture



1500V SYSTEM VOLTAGE

Approved IEC1500Vdc system voltage, saving on BoS cost

QUALIFICATIONS & CERTIFICATES

- IEC 61215 / IEC 61730
- ISO 9001: Quality Management System
- ISO 14001: Environment Management System
- ISO 45001: Occupational Health and Safety

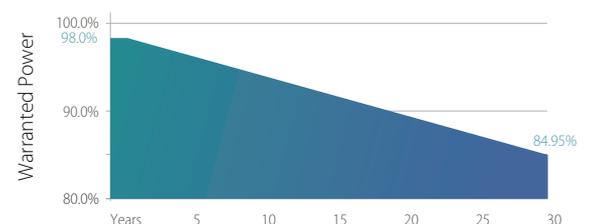


INDUSTRY LEADING WARRANTY

30-Year Linear Performance Warranty

12-Year Product Material & Workmanship Warranty

LLOYDS Product & Performance Insured by LLOYD'S



THE IDEAL SOLUTION FOR



Ground-mounted projects



Commercial / industrial rooftop projects

BiDrive UltraMax Series TSBHM-132HSG 645-655

ELECTRICAL PARAMETERS

Module Type	TSBHM645-132HSG		TSBHM650-132HSG		TSBHM655-132HSG	
	STC	NMOT	STC	NMOT	STC	NMOT
Test Condition	STC	NMOT	STC	NMOT	STC	NMOT
Max. Power Output Pmax (W)	645	484	650	488	655	492
Power Tolerance	0~+3%	0~+3%	0~+3%	0~+3%	0~+3%	0~+3%
Max. Power Voltage Vmp (V)	37.72	35.10	37.93	35.32	38.13	35.50
Max. Power Current Imp (A)	17.10	13.79	17.14	13.82	17.18	13.86
Open Circuit Voltage Voc (V)	44.82	42.61	45.02	42.81	45.22	42.99
Short Circuit Current Isc (A)	18.34	14.79	18.38	14.83	18.42	14.86
Module Efficiency (%)	20.76%		20.92%		21.09%	

*STC (Standard Test Condition): Irradiance 1000W/m², Cell Temperature 25 °C, Air Mass 1.5

*NMOT (Nominal Module Operating Temperature), Irradiance of 800W/ m², Spectrum AM 1.5, Ambient Temperature 20°C, Wind Speed 1m/s

REAR SIDE POWER GAIN

5%	Maximum Power (Pmax)	677	683	688
	Module Efficiency STC (%)	21.80%	21.97%	22.14%
15% <td>Maximum Power (Pmax)</td> <td>742</td> <td>748</td> <td>753</td>	Maximum Power (Pmax)	742	748	753
	Module Efficiency STC (%)	23.88%	24.06%	24.25%
25% <td>Maximum Power (Pmax)</td> <td>806</td> <td>813</td> <td>819</td>	Maximum Power (Pmax)	806	813	819
	Module Efficiency STC (%)	25.95%	26.16%	26.36%

TEMPERATURE COEFFICIENTS

Temperature Coefficients of Pmp	-0.36%/°C
Temperature Coefficients of Voc	-0.29%/°C
Temperature Coefficients of Isc	+0.048 %/°C
NMOT	42°C±3°C

MECHANICAL PARAMETERS

Cell Type	Mono, 210×105mm
Cell Arrangement	132 pcs 2×(6×11)
Dimension (L×W×H)	2384×1303×35mm
Weight	38.7kg
Front Cover / Back Cover	2.0mm AR Coating Tempered Glass / 2.0mm Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 bypass diodes
Cable	4mm ² , +460mm, -340mm, or customizable
Connector	PV Connector

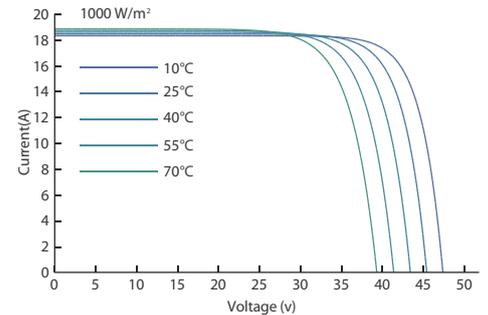
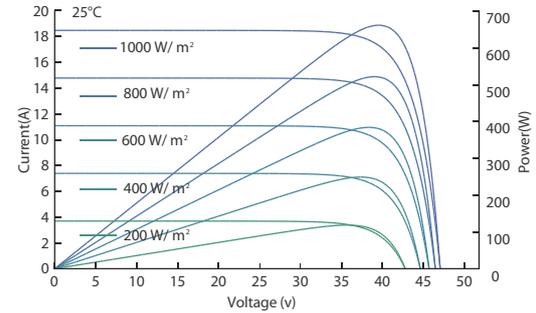
OPERATING PARAMETERS

Maximum System Voltage(V)	1500(DC)
Operating Temperature(°C)	-40~+85
Max. Wind Load / Snow Load(Pa)	2400/5400
Max. Over Current(A)	25
Application Class	Class A
Fire Rating	Class A

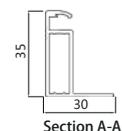
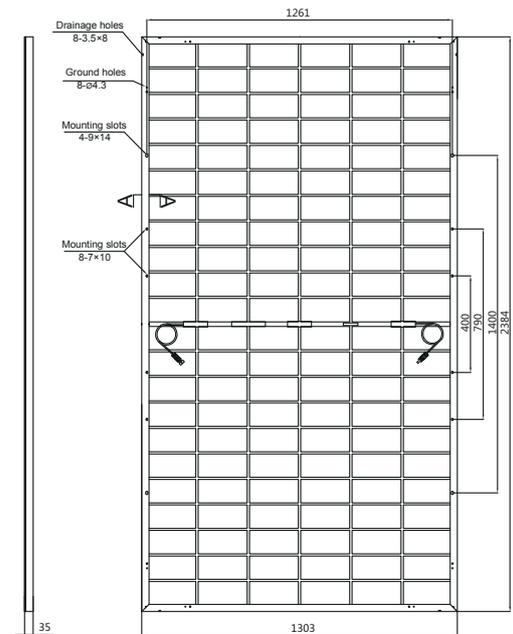
PACKAGE INFORMATION

Quantity / Pallet	31 pcs
Container 40'HQ	17 pallets, 527 pcs

I-V CURVES



TECHNICAL DRAWINGS



*The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to ongoing innovation, R&D enhancement, Zhejiang BeyonDSun Green Energy Technology Co., Ltd. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.