

BiMAX 5N

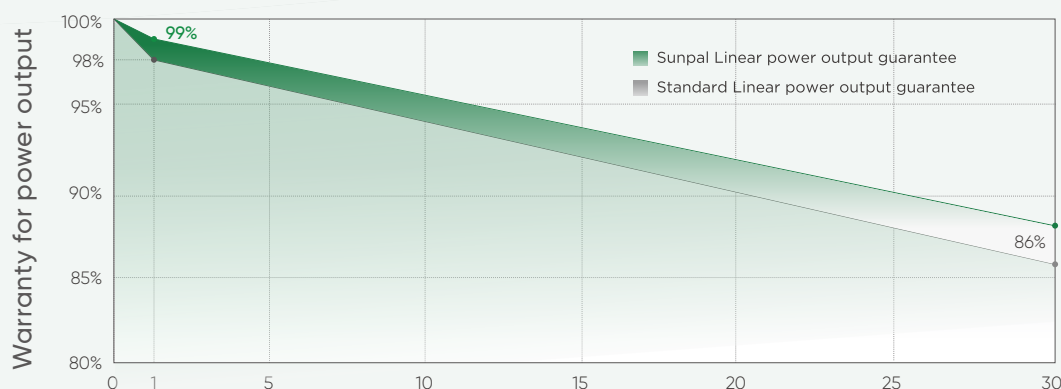
570-590W

**N-type TOPCon
Bifacial Dual Glass
Solar Module**

Quality Guarantee

25-year Materials Warranty

30-year Power Warranty



87.4%

22.84%^{Max}

Module Eff.

0~+5W

Positive Tolerance

Complete System and Product Certifications

IEC61215/IEC61730

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO 45001: Occupational Health and Safety Management System



* Specifications subject to technical changes and tests. Sunpal Solar reserves the right of interpretation.

Positive power tolerance (0~+5W) guaranteed

High module conversion efficiency (up to 22.84%)

Slower power degradation enabled by Low LID Mono TOPCON technology: first year <1%, 0.40% year 2-30

Solid PID resistance ensured by solar cell process optimization and careful module BOM selection

Reduced resistive loss with lower operating current

Higher energy yield with lower operating temperature

Reduced hot spot risk with optimized electrical design and lower operating current



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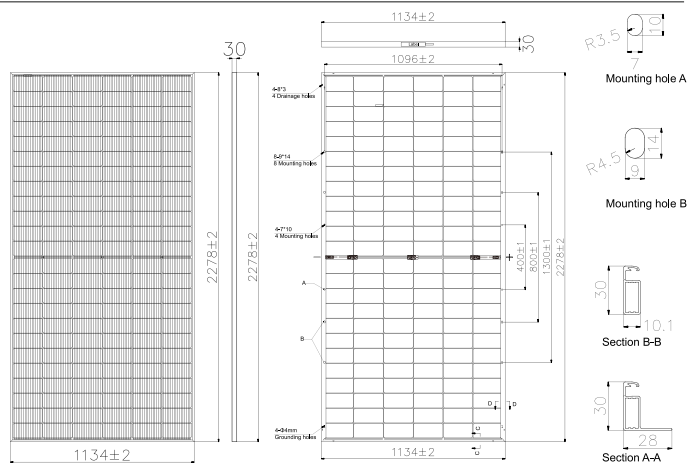
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MECHANICAL CHARACTERISTICS

Solar Cells	N-type Mono
No. of Cells	144 (6x24)
Dimensions	2278 x 1134 x 30mm
Weight	31.5kg
Front / Back Glass	2.0mm coated semi-tempered glass
Frame	Anodized aluminium alloy
Junction Box	Ip68 rated (3 by pass diodes)
	4.0mm ²
Output Cables	250mm (+) / 350mm (-)
	Length can be customized
Connectors	Mc4 compatible
Mechanical load test	Front 5400Pa / Rear 2400Pa



ELECTRICAL PARAMETERS

POWER CLASS	570		575		580		585		590	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum power (Pmax)	570W	429W	575W	433W	580W	437W	585W	441W	590W	445W
Open Circuit Voltage (Voc)	51.41V	48.69V	51.55V	48.82V	51.68V	48.96V	51.81V	49.09V	51.94V	49.23V
Short Circuit Current (Isc)	14.15A	11.41A	14.22A	11.47A	14.29A	11.53A	14.36A	11.59A	14.43A	11.65A
Voltage at Maximum power (Vmpp)	42.41V	39.36V	42.56V	39.51V	42.71V	39.66V	42.86V	39.80V	43.00V	39.95V
Current Maximum Power (Impp)	13.44A	10.90A	13.51A	10.96A	13.58A	11.02A	13.65A	11.08A	13.72A	11.14A
MODULE EFFICIENCY (%)	22.07%		22.26%		22.45%		22.65%		22.84%	

STC: Irradiance 1000W/m², cell temperature 25°C, AM1.5G NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s, AM1.5G

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

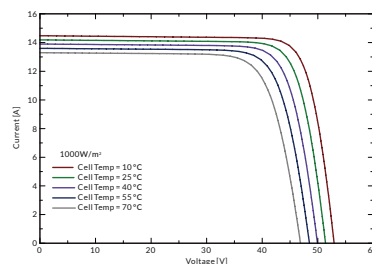
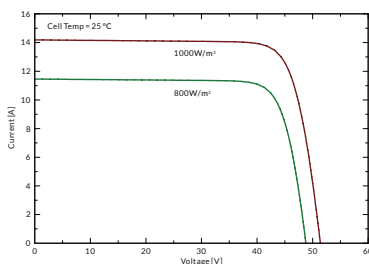
5%	Maximum power (Pmax)	599W	604W	609W	614W	620W
	Module Efficiency STC (%)	23.17%	23.37%	23.57%	23.78%	23.98%
15%	Maximum power (Pmax)	656W	661W	667W	673W	679W
	Module Efficiency STC (%)	25.37%	25.60%	25.82%	26.04%	26.27%
25%	Maximum Power (Pmax)	713W	719W	725W	731W	738W
	Module Efficiency STC (%)	27.58%	27.82%	28.07%	28.31%	28.55%

PACKING CONFIGURATION

Container	20'GP	40'HQ
Pieces per pallet	37	37
Pallets per container	5	20
Pieces per container	185	740

I-V CURVE

575ND/I-V



OPERATING CHARACTERISTICS

Operating Module Temperature	-40°C to +85°C
Maximum System Voltage	1500 DC (IEC)
Maximum Series Fuse Rating	30A
Power Tolerance	0/+5W

TEMPERATURE CHARACTERISTICS

Nominal Operating Temperature (NMOT)	45±2°C
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.045%/°C

Three Phase Hybrid Inverter

SUN-29.9/30/35K-SG01HP3-EU-BM3

SUN-40/50K-SG01HP3-EU-BM4



- 100** 100% unbalanced output
-  AC couple to retrofit existing solar system
- 10** Max. 10 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- 100** Max. charging/discharging current of 100A
- H** High voltage battery, higher efficiency
- 6** 6 time periods for battery charging/discharging
-  Support storing energy from diesel generator

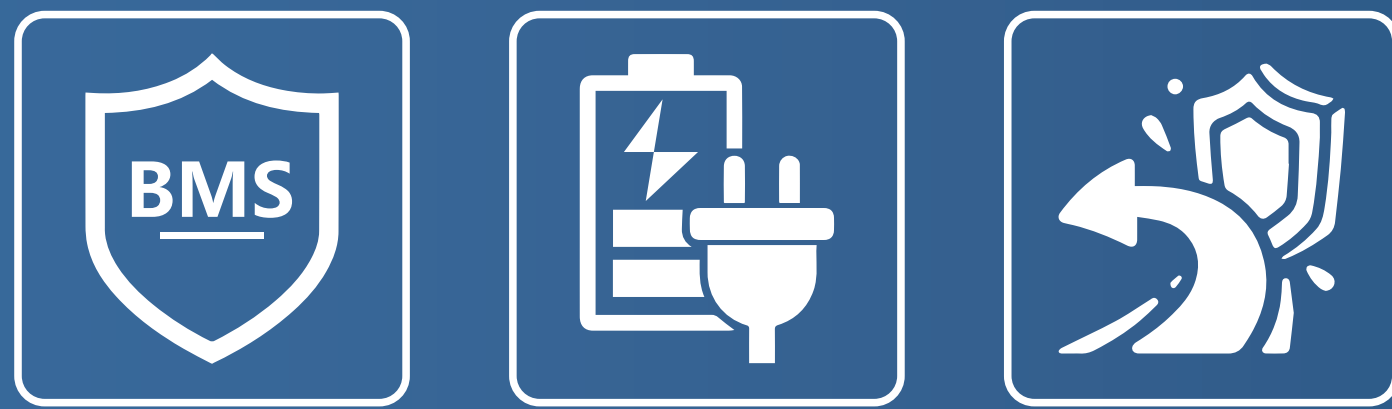
Model	SUN-29.9K-SG01HP3 -EU-BM3	SUN-30K-SG01HP3 -EU-BM3	SUN-35K-SG01HP3 -EU-BM3	SUN-40K-SG01HP3 -EU-BM4	SUN-50K-SG01HP3 -EU-BM4
Battery Input Data					
Battery Type	Lithium-ion				
Battery Voltage Range (V)	160-800				
Max. Charging Current (A)	50+50				
Max. Discharging Current (A)	50+50				
Charging Strategy for Li-ion Battery	Self-adaption to BMS				
Number of Battery Input	2				
PV String Input Data					
Max. PV Access Power (W)	59800	60000	70000	80000	100000
Max. PV Input Power (W)	47840	48000	56000	64000	80000
Max. PV Input Voltage (V)	1000				
Start-up Voltage (V)	180				
MPPT Voltage Range (V)	150-850				
Rated PV Input Voltage (V)	600				
Max. Operating PV Input Current (A)	36+36+36			36+36+36+36	
Max. Input Short-Circuit Current (A)	55+55+55			55+55+55+55	
No. of MPP Trackers/ No. of Strings MPP Tracker	3/2+2+2			4/2+2+2+2	
AC Input/Output Data					
Rated AC Input/Output Active Power (W)	29900	30000	35000	40000	50000
Max. AC Input/Output Apparent Power (VA)	29900	33000	38500	44000	55000
Rated AC Input/Output Current (A)	45.4/43.4	45.5/43.5	53.1/50.8	60.7/58	75.8/72.5
Max. AC Input/Output Current (A)	45.4/43.4	50/47.9	58.4/55.8	66.7/63.8	83.4/79.8
Max. Continuous AC Passthrough (grid to load) (A)	200				
Peak Power (off-grid) (W)	1.5 times of rated power, 10s				
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Rated Input/Output Voltage/Range (V)	220/380V, 230/400V 0.85Un-1.1Un				
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65				
Grid Connection Form	3L+N+PE				
Total Current Harmonic Distortion THDi	<3% (of nominal power)				
DC Injection Current	<0.5% In				
Efficiency					
Max. Efficiency	97.60%				
Euro Efficiency	97.0%				
MPPT Efficiency	>99%				
Equipment Protection					
Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection level				
Surge Protection Level	TYPE II(DC), TYPE II(AC)				
Interface					
Communication Interface	RS485/RS232/CAN				
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)				
General Data					
Operating Temperature Range (°C)	-40 to +60°C, >45°C Derating				
Permissible Ambient Humidity	0-100%				
Permissible Altitude	2000m				
Noise (dB)	≤65				
Ingress Protection(IP) Rating	IP 65				
Inverter Topology	Non-Isolated				
Over Voltage Category	OVC II(DC), OVC III(AC)				
Cabinet Size (WxHxD mm)	527×894×294 (Excluding Connectors and Brackets)				
Weight (kg)	80				
Type of Cooling	Intelligent Air Cooling				
Warranty	5 Years/10 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy				
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105				
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				

HIGH VOLTAGE

LiFePO4 BATTERY



204.8-512V
HVM64-160S100BL-U



01 BATTERY FEATURES

- ◆ Original A-grade lithium iron phosphate battery cell has high safety and reliability
- ◆ Intelligent integrated BMS, all-round protection strategy and fault detection
- ◆ Modular design, parallel expansion, flexible choice of voltage and capacity
- ◆ Large capacity, high charging and discharging efficiency, more than 6000 cycle life
- ◆ Built-in fire extinguishing device, automatically deal with ultra-early warning thermal runaway status
- ◆ Bottom tripod design, standard cabinet for easy installation and easy maintenance
- ◆ ON/OFF switch control output
- ◆ LCD display, dynamic display of system operating status data

Product Description				
Product Type	HVM64S100BL-U	HVM96S100BL-U	HVM128S100BL-U	HVM160S100BL-U
Number of Modules	4	6	8	10
Battery Capacity	100Ah	100Ah	100Ah	100Ah
Battery Energy	20.48KWh	30.72KWh	40.96KWh	51.2KWh
Size(L×W×H) mm	548×584×1500	548×584×1500	548×584×1950	548×584×2300
Weight	235Kg	384Kg	425Kg	510Kg
Standard Charge Current	20A	20A	20A	20A
Standard Discharge Current	20A	20A	20A	20A
Features				
Battery Type	LFP			
Cycle Life	≥ 6000 times @ 80% DOD, 25 °C			
Nominal Voltage	204.8V	307.2V	409.6V	512V
Operating Voltage Range	160-584V			
IP Protection	IP 21			
Installation	Cabinet Holding			
Charging Temperature	0~60℃			
Discharge Temperature	-10~60℃			
Conventional				
BMS Monitoring Parameters	SOC, System voltage,current, cell voltage, cell temperature, PCBA temperature measurement			
Communication Port	RS485/CAN			
Waranty	5 or 10 years(optional)			

02 FIELDS OF APPLICATION

High Voltage Energy Storage Batteries can be stacked, and the main use areas are as follows:

- Standby power
- Home energy storage
- Machine shop
- Solar storage ...

