

## Battery Storage

# PGEM

- Quick installation
- Remote monitoring
- Flexible remote upgrade
- Auto-addressing for master/slaves set up
- Parallel up to 32 modules
- Wide range inverter compatibility
- 1C rate continuous charge/discharge
- Multi protection to avoid over discharge
- Smart BMS management for longer lifespan
- Active balancing charging, low self consumption



# Specifications

Model	PGEM
Cell Type	LFP
Rated Power	5.12kWh
Rated Capacity	100Ah
Rated Voltage	51.2V
Charge Voltage	56.5V
Max. Charge/Discharge Current	100A
Discharge Peak Current	105A / 15s, 150A / 0.5s
Parallel	Up to 32 units parallelable w/o extra device needed, slave battery drops offline or come back alive does not affect system running
IP Level	IP20
Dimension(W*D*H mm)	428*640*166mm
Weight	58kg/127.9lbs
Communication	CAN/RS485
Compatible Inverter	Victron, Luxpower, Deye, Voltronic, SMA Goodwe, Growatt, Sofar, Solark, SRNE, Must
Humidity	5%~85% RH (No condensation)
Work Temperature	-20 ~ +55 °C
Storage Temperature	-10 ~ +35 °C
Remote Maintenance	Flexible remote upgrade, remote monitoring Original firmware backup to prevent upgrade failure
Warranty *	10 years, 6000 cycles
Certification	CE UN38.3; IEC62619
Protection	Overcharge/discharge/current/voltage/temperature protection Short circuit protection, Reverse connection protection Stronger active balance, Low SOC protection

# ECO HYBRID

## Single-Phase

# SNA 3-6K

- Off-grid seamless switching
- 2 MPPTs, Max. PV input: 9.6kW
- Wide PV input voltage range: 100~500V
- Supports up to 16pcs in parallel
- Max. charging and discharging current 140A
- Dedicated Port: Supports generator, AC coupling or smart load management for enhanced stability
- 24/7 real-time monitoring via LUX app with worry-free updates



# Specifications

Input (PV DC)	SNA 3000W	SNA 4000W	SNA 5000W	SNA 6000W
Max. PV input power(W)	6000 (3000/3000)	8000 (4000/4000)	8000 (4000/4000)	9600 (4800/4800)
Rated PV input voltage(V)	320			
Number of independent MPPT inputs	2/(1:1)			
PV input voltage range(V)	100~500			
MPPT voltage range(V)	120~385			
Start-up voltage(V)	100			
Max. PV input current per MPPT(A)	17/17			
Max. PV short-circuit current input per MPPT(A)	25/25			
<b>Battery</b>				
Compatible battery type	Lithium-ion/Lead-Acid			
Rated battery voltage(V)	48			
Battery voltage range(V)	38.4~60			
Max. charge/discharge current(A)	70/70	90/90	110/110	140/140
Max. charge/discharge power(W)	3000	4000	5000	6000
Recommend capacity of battery per inverter	>100AH	>200AH	>200AH	>200AH
Force wake up battery from PV function	YES			
Force wake up battery from Grid function	YES			
<b>Grid</b>				
Rated AC voltage(V)	230			
Rated AC frequency(Hz)	50/60			
Rated AC output current(A)	13.5	17.5	22	26.5
Rated AC output power(W)	3000	4000	5000	6000
Max. AC input power(W)	8000			
PF	0.99 (Adjustable from 0.8 leading to 0.8 lagging)			
THDI	<5%			
Max. continuous AC passthrough current(A)	35			40
<b>UPS</b>				
Rated output power(W)	3000	4000	5000	6000
Rated output voltage(V)	230			
Rated output current(A)	13.5	17.5	22	26.5
Rated output frequency(Hz)	50/60			
Surge power, duration	2Pn, <5s			
Switching time	<10ms@Single/<20ms@Parallel			
Wave form	Sine wave			
THDV	3%			
<b>Efficiency</b>				
Max. MPPT efficiency	99.9%			
Max. efficiency	93.0%			
Max. charge efficiency	93.0%			
Max. discharge efficiency	93.0%			
<b>Protection</b>				
Over current/voltage protection	YES			
AC Short-circuit current protection	YES			
Grid monitoring	YES			
AC Surge protection	Type III			
Battery reverse polarity protection	YES			
<b>General</b>				
Dimensions(W*H*D)	330*505*135mm/13*19.9*5.3inch			
Weight	14.5kg/32lbs			
Ingress protection rating	IP20			
Operating environment temperature range(°C)	0~50			
Storage temperature range(°C)	-15~60			
Relative humidity	5%~95%			
Display & Communication interface	LCD+LED, RS485/Wi-Fi/CAN			
Warranty	2 years			
Cooling method	Smart Cooling			
Topology	Transformer-less			
Altitude	<2000m			
Noise emission(typical)	<50dB			
<b>Standards &amp; Certification</b>				
IEC 62109-1, IEC 61000, IEC62040/EN62040, IEC62109, NRS 097-2-1				



High Power Output  
Low LCOE

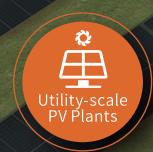
Maximum Power  
720W+

# TWMNF

N-type Half-cell  
Bifacial Module(66)

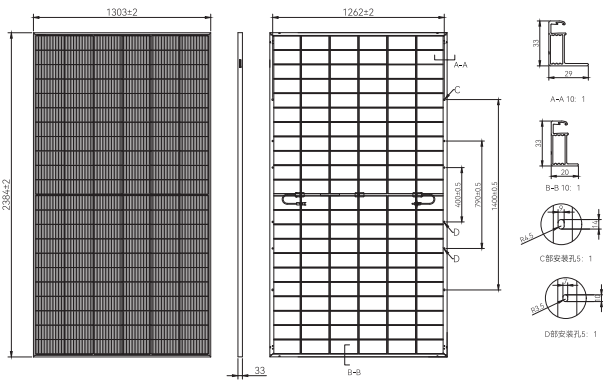
## 66HD700-720W

[www.tongwei.com.cn](http://www.tongwei.com.cn)



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**DRAWINGS (Unit: mm)**



**Electrical Characteristics (STC)**

Moduel type: TWMNF-66HDXXX					
Maximum Power: Pmax [W]	700	705	710	715	720
Open Circuit Voltage: Voc [V]	48.60	48.77	48.94	49.11	49.28
Short Circuit Current: Isc [A]	18.35	18.40	18.45	18.50	18.55
Voltage at Maximum Power: Vmp [V]	40.35	40.52	40.69	40.86	41.03
Current at Maximum Power: Imp [A]	17.35	17.40	17.45	17.50	17.55
Module Efficiency: η [%]	22.5	22.7	22.9	23.0	23.2

\* STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

**Electrical Characteristics (NMOT)**

Maximum Power: Pmax [W]	526	530	534	538	541
Open Circuit Voltage: Voc [V]	46.17	46.33	46.49	46.65	46.82
Short Circuit Current: Isc [A]	14.82	14.86	14.90	14.94	14.98
Voltage at Maximum Power: Vmp [V]	37.55	37.73	37.90	38.08	38.18
Current at Maximum Power: Imp [A]	14.01	14.05	14.09	14.13	14.17

\* NMOT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, AM=1.5, Wind Speed 1m/s

**ELECTRICAL CHARACTERISTICS (Rear Power Gain)**

5%	Maximum Power: Pmax[W]	735	740	745	750	756
	Module Efficiency: η [%]	23.7	23.8	24.0	24.1	24.3
15%	Maximum Power: Pmax[W]	805	810	816	822	828
	Module Efficiency: η [%]	25.9	26.1	26.3	26.5	26.7
25%	Maximum Power: Pmax[W]	875	881	887	893	900
	Module Efficiency: η [%]	28.2	28.4	28.6	28.7	29.0

**TEMPERATURE PARAMETERS**

Temperature Coefficient (Pmax)	-0.28%/°C
Temperature Coefficient (Voc)	-0.24%/°C
Temperature Coefficient (Isc)	+0.046%/°C
NMOT	45±2°C

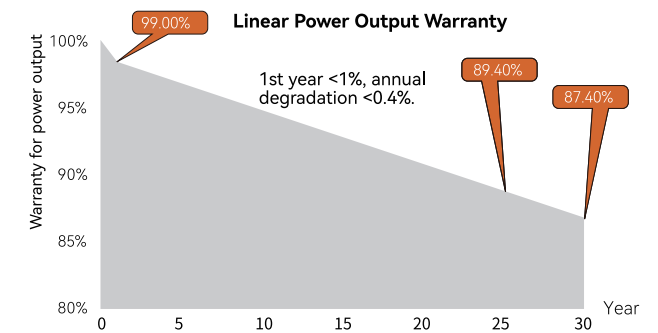
**MAXIMUM RATINGS**

Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	35A
Power Output Tolerance	0~+3%
Bifaciality	80±5%

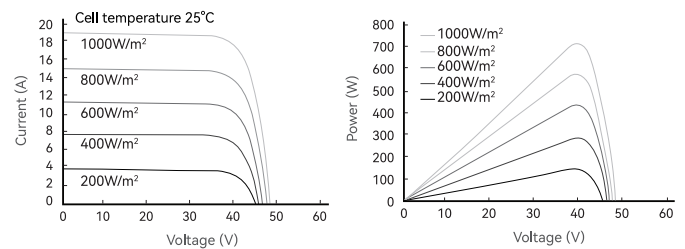
**MECHANICAL PARAMETERS**

Cells	TNC(N Type Monocrystalline Cell)
Cell Orientation	132[6×22]
Dimension	2384±2×1303±2×33mm
Weight	37.9kg
Front Glass	2.0mm AR coated heat strengthened glass
Rear Glass	2.0mm heat strengthened glass
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Output Cable	4.0mm <sup>2</sup>
Cable Length	+400mm, -200mm or ±1400mm,length can be customized
Wind/Snow Load	2400Pa/5400Pa
Packaging	33pcs per pallet, 594pcs per 40'HC

**WARRANTY**



**I-V CURVE**



**CERTIFICATIONS**

**Quality Management System and Product Certification**

- ISO 9001: 2015/Quality management system
- ISO 14001: 2015/Environmental management system
- ISO 45001: 2018/Occupation health safety management system
- ISO 50001: 2018/Energy management system
- IEC 62941: 2019/Quality system for PV module manufacturing
- IEC 61215/61730, IEC 62804(PID), IEC 61701(Salt), IEC 62716 (Ammonia), IEC 60068-2-68(Sand)

