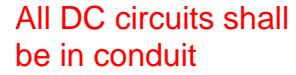


NOTED TO CONTRACTOR  
 APPROVED  
 11/17/2025





Design optimized for lower operating current, resulting in minimized hot spot loss and improved temperature coefficient.



Certified to withstand: wind load (2400 Pa) and snow load (5400 Pa).



100% triple EL test enables remarkable reduction of module hidden crack rate.

## COMPREHENSIVE CERTIFICATES



ISO 9001: Quality Management System

ISO 14001: Environmental Management System Standard

ISO 45001: International Occupational Health and Safety Assessment System Standard

\* Different markets have different certification requirements. Also, the products are under rapid innovation. Please confirm the certification status with regional sales representatives.

## ELECTRICAL CHARACTERISTICS

2x72 cells

Model of modules	SGN-590-BDG1	
	STC	NMOT
Peak power - $P_{mp}$ (W)	590	452
Open circuit voltage - $V_{oc}$ (V)	52.35	50.12
Short circuit current - $I_{sc}$ (A)	13.90	11.20
MPP voltage - $V_{mp}$ (V)	44.40	42.51
MPP current - $I_{mp}$ (A)	13.29	10.63
Module efficiency - $\eta_m$ (%)	22.8	

STC (Standard Testing Conditions): Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25 °C, Spectra at AM1.5

NMOT (Nominal Module Operating Temperature): Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20 °C, Spectra at AM1.5, Wind at 1m/s

## ELECTRICAL CHARACTERISTICS WITH DIFFERENT POWER BIN (REFERENCE TO 13.5% IRRADIANCE RATIO)

Peak power - $P_{mp}$ (W)	654
Open circuit voltage - $V_{oc}$ (V)	52.35
Short circuit current - $I_{sc}$ (A)	15.40
MPP voltage - $V_{mp}$ (V)	44.40
MPP current - $I_{mp}$ (A)	14.72
Irradiance ratio (rear/front)	13.5%

## STRUCTURAL CHARACTERISTICS

Module dimension (L*W*H)	89.69 x 44.65 x 138 inch (2278 x 1134 x 35 mm)
Weight	69.45 lbs (31.5 kg)
Number of cells	144 cells
Cell	N-type monocrystalline (M10)
Front Glass	2.0mm, Anti-Reflection Coating
Back Glass	2.0mm, Heat Strengthened Glass
Frame	Anodized aluminum alloy
Junction box	IP68 rated (3 diodes)
Output wire	4mm <sup>2</sup> (IEC)12 AWG (UL)
Wire length (including Connector)	+400/-200mm (+15.75/-7.87in.) or customized
Connector	MC4 Compatible
Pieces per Pallet	31 pcs/Pallet
Pieces per Container (Normal/Weight-limited area)	720/576 pcs/40HQ

## OPERATING PARAMETERS

Power tolerance (W)	(0,+5)
Maximum system voltage (V)	1500
Maximum rated fuse current (A)	30
Current operating temperature (°C)	-40~+85 °F (-40~+85 °C)
Bifaciality	80±10 %
Fire performance	Type 29

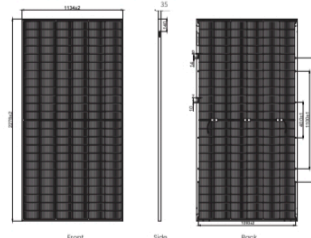
## MECHANICAL LOADING

Front side maximum static loading (Pa)	5400
Rear side maximum static loading (Pa)	2400
Hailstone test (mm)	40

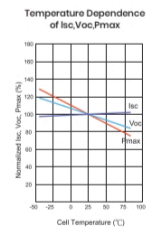
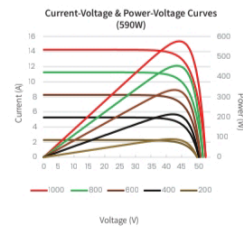
## TEMPERATURE RATINGS

Temperature coefficient ( $P_{max}$ )	-0.29 %/K
Temperature coefficient ( $V_{oc}$ )	-0.28 %/K
Temperature coefficient ( $I_{sc}$ )	+0.04 %/K
Nominal Module Operating Temperature	109.4±35.6 °F (43±2 °C)

## MODULE DIMENSIONS (MM)



\* The unmarked tolerance is ±1 mm  
Length shown in mm

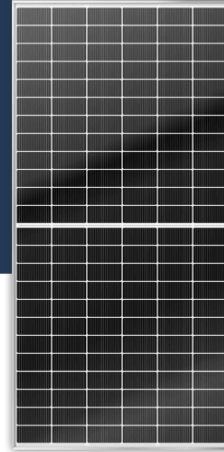




## N-Type High efficiency

Bifacial Dual Glass Module

SGN-590-BDG1



Bifacial technology allows for the harvesting of up to an additional 30% energy from the rear side of the module.



30 years lifespan brings 10-30% additional power generation comparing with conventional P-type module.



N-type solar cell has no LID naturally which can increase power generation.



Excellent low irradiance performance.



Enhanced light trapping and optimized current collection contribute to the improvement of both output and reliability.



Industry leading lowest thermal coefficient of power.



Design optimized for lower operating current, resulting in minimized hot spot loss and improved temperature coefficient.

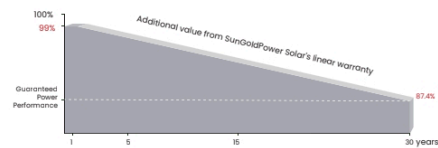


Certified to withstand: wind load (2400 Pa) and snow load (5400 Pa).



100% triple EL test enables remarkable reduction of module hidden crack rate.

### LINEAR PERFORMANCE WARRANTY



12 years

Product quality & process warranty

30 years

Linear power warranty

0.40 %

Annual degradation Over 30 years

### COMPREHENSIVE CERTIFICATES



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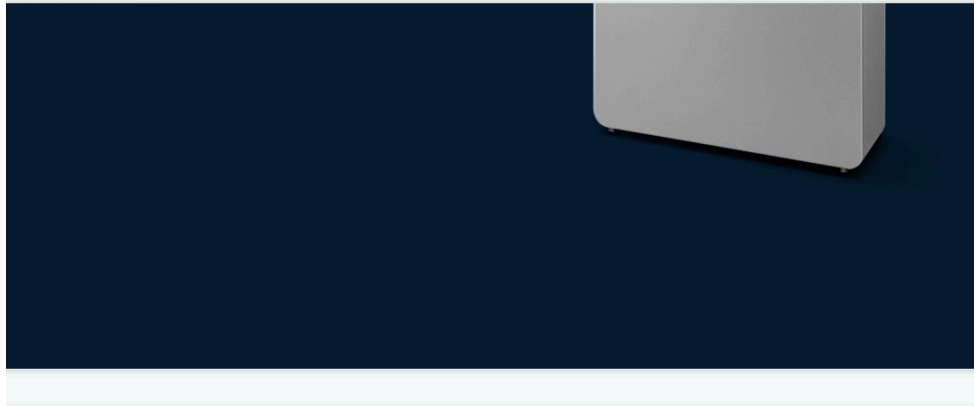


MODEL	SPH8048P	SPH10048P
INVERTER OUTPUT		
Rated Output Power	8,000W	10,000W
Max.Peak Power	16,000W	20,000W
Rated Output Voltage	120/240Vac(split phase/single phase)	
Load Capacity of Motors	5HP	6HP
Rated AC Frequency	50/60Hz	
Waveform	Pure Sine Wave	
Switch Time	10ms (typical)	
Parallel capacity	6	
Overload	After triggering the overload protection the inverter will resume output after 3 minutes, 5 consecutive overloads will switch off the output until the inverter is restarted. (102%<load<110%) ±10%: error and output shutdown after 5min; (110% < load < 125%) ±10%: error and output shutdown after 10s. Load > 125% ±10%: error reported and output switched off after 5s.	
BATTERY		
Battery Type	Li-Ion / Lead-Acid / User Defined	
Rated Battery Voltage	48Vdc	
Voltage Range	40-60Vdc	
Max.MPPT Charging Current	200A	
Max.Mains/Generator Charging Current	100A	120A
Max.Hybrid Charging Current	180A	200A
PV INPUT		
Num. of MPP Trackers	2	
Max.PV array power	11,000W	
Max.input current	22/22A	
Max.Voltage of Open Circuit	500Vdc	
MPPT Voltage Range	125-425Vdc	
MAINS / GENERATOR INPUT		
Input Voltage Range	90-140V (Single phase), 180-260V (Split Phase)	
Frequency Range	50/60Hz	
Bypass Overload Current	63A	
EFFICIENCY		
MPPT Tracking Efficiency	99.9%	
Max. Battery Inverter Efficiency	92%	
GENERAL		
Dimensions	17.7*25.6*5.1inch	17.9*26*5.1inch
Weight	53.5lb	54lb
Protection Degree	IP20, Indoor Only	
Operating Temperature Range	14~131°F, >113°F derated (-10~55°C,>45°C derated)	
Noise	<60dB	
Cooling Method	Internal Fan	
No-load consumption	95W/ 100W	
Warranty	2 Years	
COMMUNICATION		
Embedded Interfaces	RS485 / CAN / USB / Dry contact	
External Modules(Optional)	Wi-Fi / GPRS	
CERTIFICATION		
Safety	IEC62109-1, IEC62109-2,UL1741	
EMC	EN61000-6-1,EN61000-6-3,FCC15classB	
ROHS	Yes	

Battery Option: Only Inverter

Add to cart - \$1,690.00





## Introduction

- The Powerwall X 51.2V 200AH LFP Battery is compact and well-designed, offering over 8000 deep cycles. It can connect up to 32 units in parallel, providing a total capacity of 328kWh. This versatility makes it ideal for residential and commercial applications, as well as other energy storage systems
- It introduces touch-screen panel for real-time monitoring, displaying vital information like state of charge, current, and voltage. allows monitoring, enhancing user interaction and efficiency. Intelligent BMS protects the battery from overcharging, deep discharging, overloading, overheating, and short circuits.
- The CAN/RS485 Communication Protocol Lithium-Ion Battery is compatible with most inverters on the market, including Growatt, Deye, SunGoldPower, Luxpower, Victron Energy, Schneider, EG4, Sol-Ark, Victron, MppSolar, Megarevo, and more.
- Supported by a 10-year warranty and backed by technical support, SUNGOLDPOWER ensures exceptional pre-sales and after-sales service, providing peace of mind for all your energy needs throughout its 15-year lifespan.

## Technical Specifications

Product Model	SG48200T	
Rated voltage	51.2V	
Max. voltage range	44.8~57.6V, Shipping voltage>51.2V	
Charge voltage	56.0V	
Float charge voltage	54.6V	
Nominal enery@0.5c	10.24KWh	
Usable enery@0.5c	9.84kWh	
Nominal capacity@0.5c	200Ah	
Dimension	21.1* 37.2*6.8 inch (535*944*173mm)	
Weight	~198.4lb (90kg)	
Standard charge current	≤100A	
Max. charge current	140A	
Standard discharge current	≤100A	
Max. discharge current	200A (initial temp. ≤86°F ( 30°C ) )	
Peak discharge current	200~240A@5mins   240~300A@15S	
Communication	RS485 /CAN	
Max parallel number	32pcs	
Operation temperature 1	Charge: 32°F to 122°F(0 to 50°C)	
	Discharge: 14°F to 122°F (-10 to 50°C)	
Storage temperature @off mode	32°F(0°C)<T<86°F(30°C)	<6 months
	14°F(-10°C)<T<113°F(45°C)	<3 months
	Recommended environment	59°F to 95°F (15~35°C), 5~75%RH
Certificates	UN38.8 MSDSUL1973 UL9540Ais coming soon.	

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Sun Gold Power Inc



(949)600-9797



WWW.SUNGOLDPOWER.COM







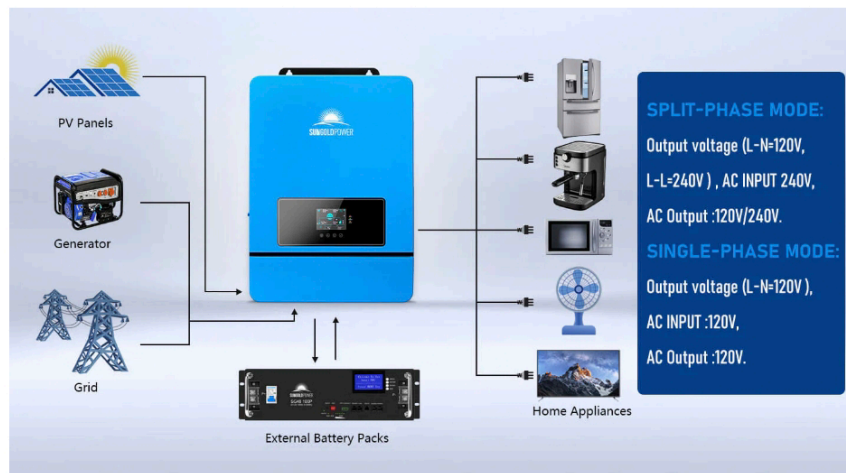
Menu

**SUNGOLD POWER**  
GOLDEN VALUE, TRUSTED POWER

0

**\*BFCM BIG SALE: UP TO 25% OFF + EXTRA 8% OFF  
SITEWIDE | CODE: BFCM8OFF \*FREE SHIPPING**

power to the load as top priority. The system  
will look for grid or generator power if no  
solar/battery is available.



Battery Option: Only Inverter

**Add to cart - \$1,690.00**



Quote



## 4 AWG THHN/THWN-2

### Specifications\*:

**Size:** 4 AWG

**Number of Strands:** 19

**Cross Section Area (mm<sup>2</sup>):** 21.2

**PVC Insulation Thickness (Conductor):** 1.020 mm /  
0.040 inches

**Nylon Jacket Thickness:** 0.150 mm / 0.006 inches

**Outside Diameter:** 8.06 mm / 0.317 inches

**Weight:** 0.166 lbs per ft

**Allowable Ampacity:** 70 Amps at 60°C / 85 Amps at  
75°C / 95 Amps at 90°C

\*Data provided on this page is subject to change  
based on different manufacturers variances.

### Specifications

Product Name	4 AWG THHN/THWN-2 Wire (By-the-foot)
O.D. (Inches)	0.318



Quote



resistant II.

**Jacket:**

A tough, polyamide, Nylon outer covering per UL-1063 and UL-83.

**Standards:**

Underwriters Laboratories Standards UL-83, UL-1063, UL-758

AWM Spec 1316, 1317, 1318, 1319, 1320, 1321

ASTM Stranding Class B3, B8, B787

Federal Specification A-A-59544

Canadian Standards Association C22.2 No. 75

NEMA WC70/ICEA S-95-658

Institute of Electrical and Electronics Engineers

**Construction:***Conductors:*

Solid, uncoated copper conductors per ASTM-B3

Stranded, uncoated copper conductors per ASTM-B3, ASTM-B787 and ASTM-B8

*Insulation:*

Color-coded Polyvinyl Chloride (PVC), heat and moisture-resistant, flame-retardant compound per UL-1063 and UL-8

**4 AWG THHN/THWN-2****Specifications\*:**