System requirement instruction	**5KW Off-grid Solar Power System**
Design Basis：	the system DC voltage is set to 96VDC

System configuration and offer:

Item	Part	Specification	Quantity	Remarks
1	Solar panel	Poly 300W	16PCS	connection method：4 strings x 4 parallels
2	PV combiner box	BR4-1	1PC	4 inputs, 1 output
3	Panel Bracket	C-shaped steel	1SET	hot-dip zinc
4	Inverter with controller built-in	BR5KW-96V	1SET	1、Built-in 50A controller. 2、Support grid/Diesel Input 3、Pure sine wave, power frequency output. 4、AC output:100/110/220/230VAC, 50/60HZ(optional)
5	GEL Battery	12V-250AH	8PCS	8pcs in series **Total release power：18KWH**
6	Battery Rack		1set	
7	Connector	MC4	16pairs	
8	PV cables (solar panel to PV combiner box)	4mm2	100M	Free for this length. If the client wants longer cables, the price needs to be confirmed again.
9	BVR Cables(PV combiner box to inverter)	16mm2	20M	
10	BVR cables with lugs (battery to inverter)	16mm2	4M	
11	Connecting cables		7SETS	
12	Breaker	3P 100A	1sets	
Instructions	According to the annual average effective sunshine 5H, the annual average daily power generation of the components is 19.2KWH; the effective discharge capacity of the battery is 18KWH; the recommended daily power consumption is 12KWH.			

Warning: The maximum power load should not exceed 6.5KW (including inductive load impact: such as refrigerators, air conditioners, washing machines, etc. with motor load).

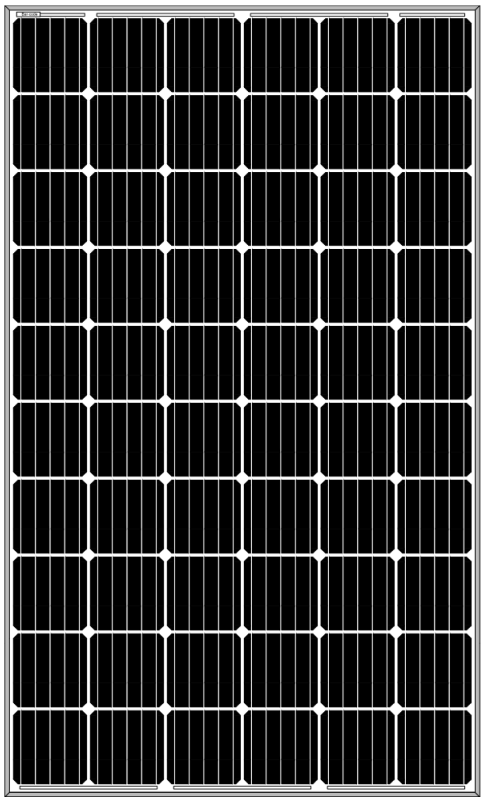
Load name	**Load's watt**	**Qty**	**Working watt(W)**	**Working Time(hrs)**	**KW/H**
lights	20W	4.00	80.00	6.00	0.48
Fan	80W	2.00	160.00	6.00	0.96
computer	150W	1.00	150.00	4.00	0.60
refrigerator	300W	1.00	300.00	24.00	2.30
Electric cooker	300W	1.00	300.00	2.00	0.60
Satellite TV receiver/VCD	25W	1.00	25.00	6.00	0.12
Color TV	100W	1.00	100.00	6.00	0.8
Air conditioner(2 P)	1500W	1.00	3000.00	4.00	6.00
Washing machine	500W	1.00	1000.00	1.00	0.5
Total			5115.00	54	12.36

BR-300W

MONO CRYSTALLINE MODULE

Positive power tolerance of 0~+3%

ISO9001:2008、ISO14001:2004、OHSAS18001 certified factory.
IEC61215、IEC61730 certified products.



KEY FEATURES

5 Busbar Solar Cell:

5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.

PID RESISTANT:

Eagle modules pass PID test, limited power degradation by PID test is guaranteed for mass production.

Low-light Performance:

Advanced glass and surface texturing allow for excellent performance in low-light environments.

Severe Weather Resilience:

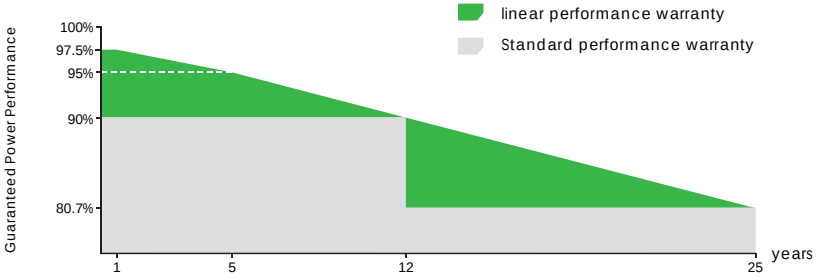
Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

Temperature Coefficient:

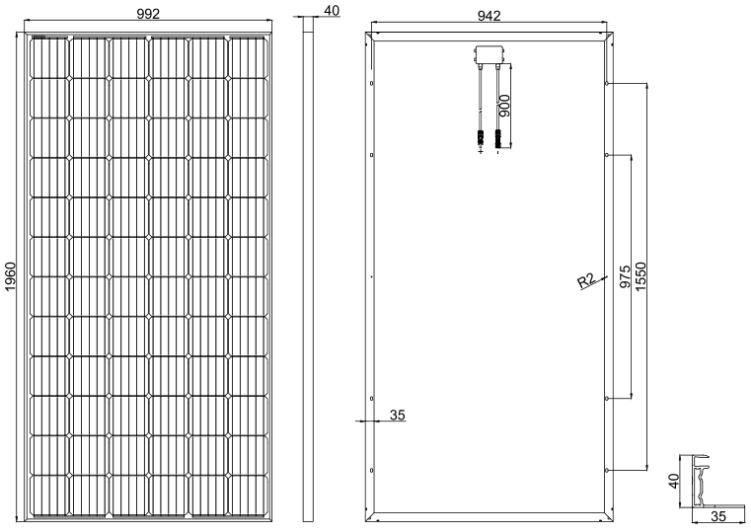
Improved temperature coefficient decreases power loss during high temperatures.

LINEAR PERFORMANCE WARRANTY

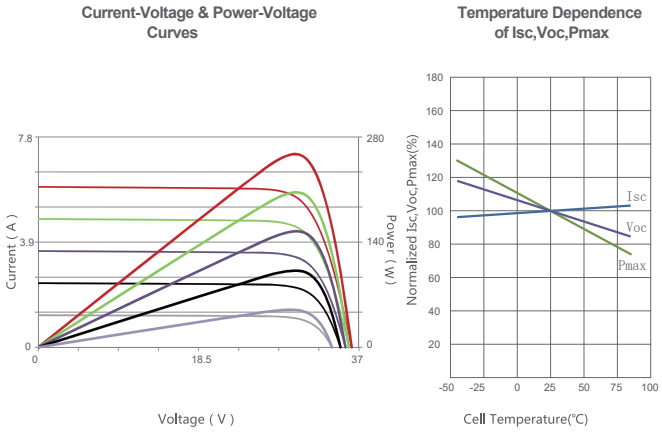
10 Year Product Warranty • 25 Year Linear Power Warranty



Engineering Drawings



Electrical Performance & Temperature Dependence



Mechanical Characteristics

Cell Type	156×156mm
No.of cells	72(6×12)
Dimensions	1960*992*40mm
Weight	20.9
Front Glass	3.2mm,High Transmission,Low Iron,Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67 Rated

SPECIFICATIONS

Module Type	BR-M300W	
	STC	NOCT
Maximum Power （Pmax）	300	225
Maximum Power Voltage（Vmp）	35.80	33.40
Maximum Power Current（Imp）	8.38	6.74
Open-circuit Voltage (Voc)	42.60	39.75
Short-circuit Current (Isc)	9.15	7.55
Module Efficiency STC (%)	17%	
Operating Temperature (℃)	-40 ~ +85	
Maximum system Voltage	1000VDC	
Maximum series fuse rating	20A	
Power tolerance	0~+3%	
Temperature coefficients of Pmax	-0.41/℃	
Temperature coefficients of Voc	-0.31/℃	
Temperature coefficients of Isc	0.06/℃	
Nominal operating cell temperature （NOCT）	45±2/℃	

STC: Irradiance 1000W/m² Cell Temperature 25°C AM=1.5

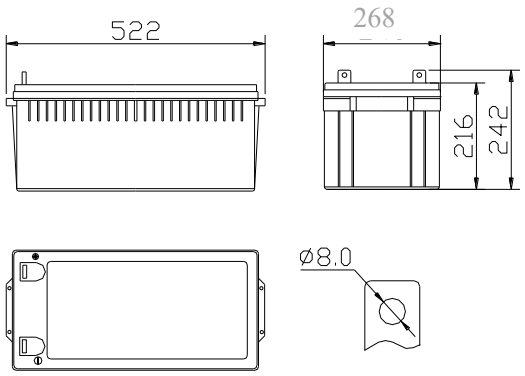
NOCT: Irradiance 800W/m² Ambient Temperature 20°C AM=1.5 Wind Speed 1m/s

* Power measurement tolerance: ± 3%

BR12-250 12V250Ah

The battery is constructed by plates,separators,safety valves and container.
Since the electrolyte is held by a glassmat separator and plates,the battery can use in any direction and position without leakage.

Outer Dimensions



Dimensions and Weight

Length (mm / inch)……522 / 20.55
Width (mm / inch) ……268 / 10.55
Height (mm / inch) ……216 / 8.50
Total Height (mm / inch)……242 / 9.53
Approx.Weight(Kg / lbs)……65.0 / 142.8

Performance Characteristics

Nominal Voltage …… 12V
Number of cell …… 6
Design Life …… 5 years
Nominal Capacity 77°F(25°C)
20 hour rate(10A,10.5V) …… 250Ah
10 hour rate(18.6A,10.5V) ……132Ah
5 hour rate (34.4A,10.5V) ……215Ah
1 hour rate(130A,9.6V) ……162Ah
Internal Resistance
Fully Charged battery 77°F(25°C) ……2.6mΩ
Self-Discharge
3% of capacity declined per month at 20°C(average)
Operation Temperature Range
Discharge …… -20~60°C
Charge …… -10~60°C
Storage …… -20~60°C
Max.Discharge Current 77°F(25°C) …… 1500A(5s)
Short Circuit Current …… 3750A

Battery Constructionn

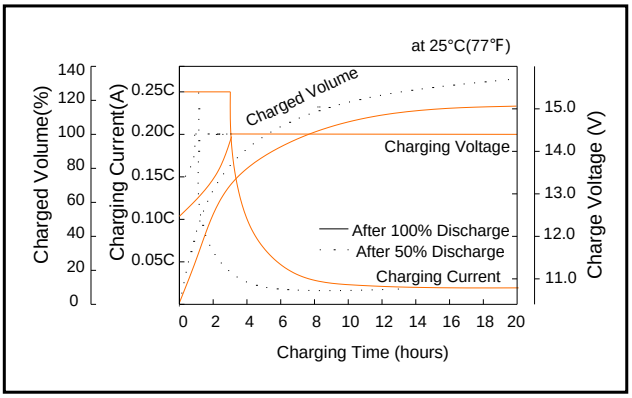
COMPONENT	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
RAW MATERIAL	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

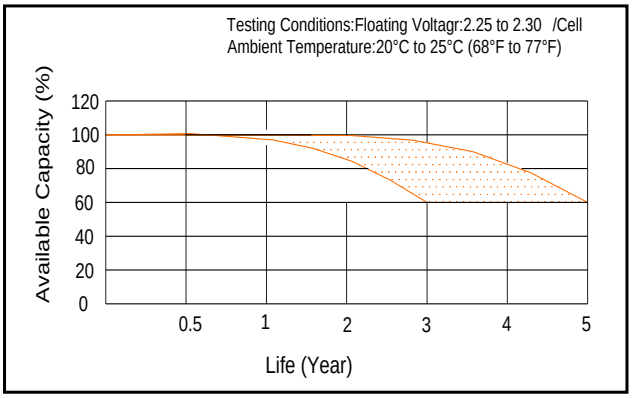
Charging Methods

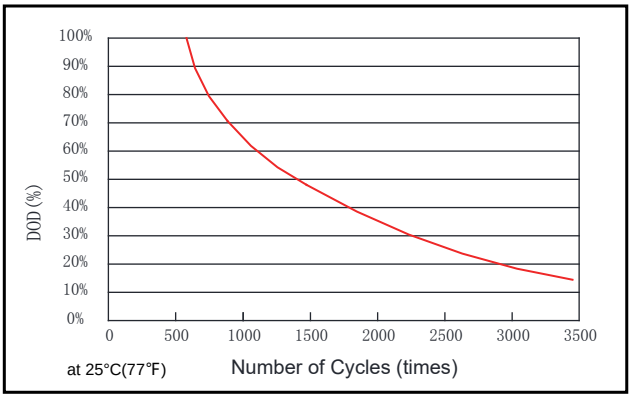
Application	Charging method	Charging Voltage at 25°C	Temperature compensation coefficient of charging voltage	Max.charging current	Charging time 25°C(h)		Temp (°C)
					100% discharge	50% discharge	
For standby power source	Constant voltage & Constant Current Charging (with current restriction)	13.4-13.8V	-18 mV/°C	75A	24	20	0~40 (32~104°F)
For cycle service		14.5-15.0V	-30 mV/°C	75A	16	10	

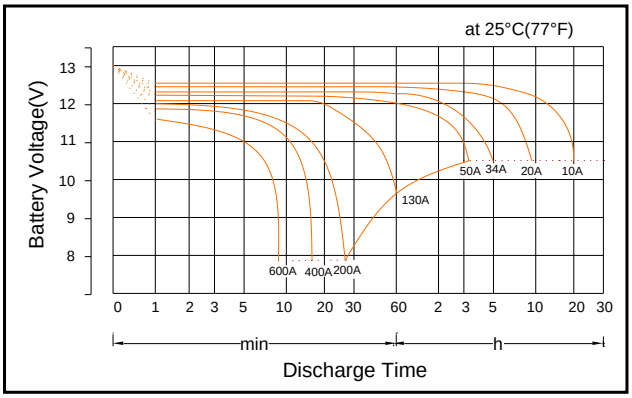
*Temperature compensation of charging voltage is not needed.when using the batteries within 15°C to 35°C range.

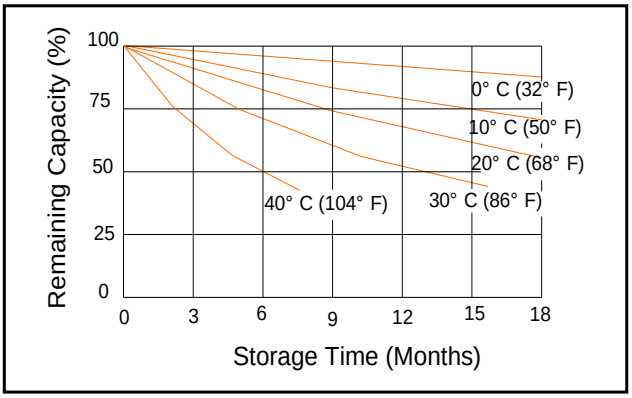
BR12-250 12V250Ah

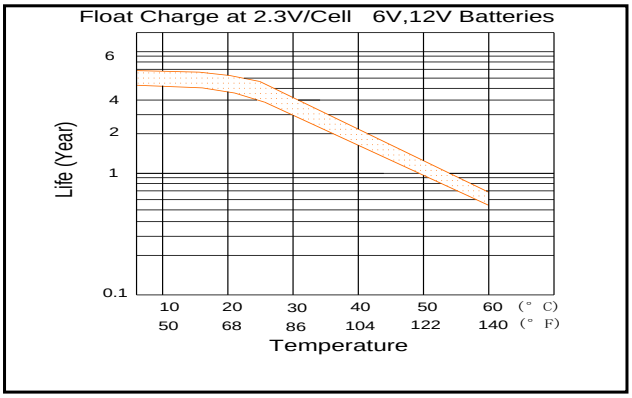












Discharge Constant Current (Amperes at 77°F25°C)

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
9.60V	875.0	700.0	500.0	288.8	205.0	150.0	87.5	63.1	43.0	28.1	23.5	12.8
9.90V	850.0	675.0	475.0	281.3	201.3	147.5	86.9	63.0	42.6	28.1	23.5	12.8
10.20V	800.0	625.0	450.0	275.0	200.0	145.0	86.4	62.5	42.5	28.0	23.1	12.5
10.50V	700.0	525.0	425.0	260.0	198.8	142.5	85.0	61.9	42.5	27.6	23.1	12.5
10.80V	625.0	450.0	400.0	225.0	195.0	137.5	82.5	60.0	42.0	27.6	22.6	12.3

Discharge Constant Power (Watts/cell at 77°F25°C)

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
9.60V	9563	7658	5528	3338	2340	1883	1013	733	498	329	274	150
9.90V	9158	7350	5220	3233	2310	1838	998	729	495	328	273	150
10.20V	8730	6908	4973	3083	2280	1838	990	724	493	328	273	149
10.50V	7650	5843	4703	2888	2250	1808	983	716	493	324	270	146
10.80V	6833	5250	4433	2513	2220	1793	953	694	489	324	266	144

ISO International Organization for Standardization
G4M20307-1591-E-16
MH29178

YANGZHOU BRIGHT SOLAR SOLUTIONS CO., LTD / BRIGHT SOLAR LIGHTING CO., LIMITED
INDUSTRY AREA OF GUOJI TOWN, YANGZHOU CITY, JIANGSU PROVINCE, 225654 P.R.CHINA
MOB:+86-15252528965 TEL: +86-514-87600306 light@brsolar.net

AS Solar Inverter Charger (5000W)

Feature:

- Pure sine wave output.
- Low frequency toroidal transformer lower loss.
- Brand new wide LCD screen, clearly and precisely shows working data.
- Three -stage charging: Constant current , constant voltage, float charge.
- Three types working modes; Battery type selectable.
- Added fault code query function, easy to monitor the operation in real time.

Product Parameters

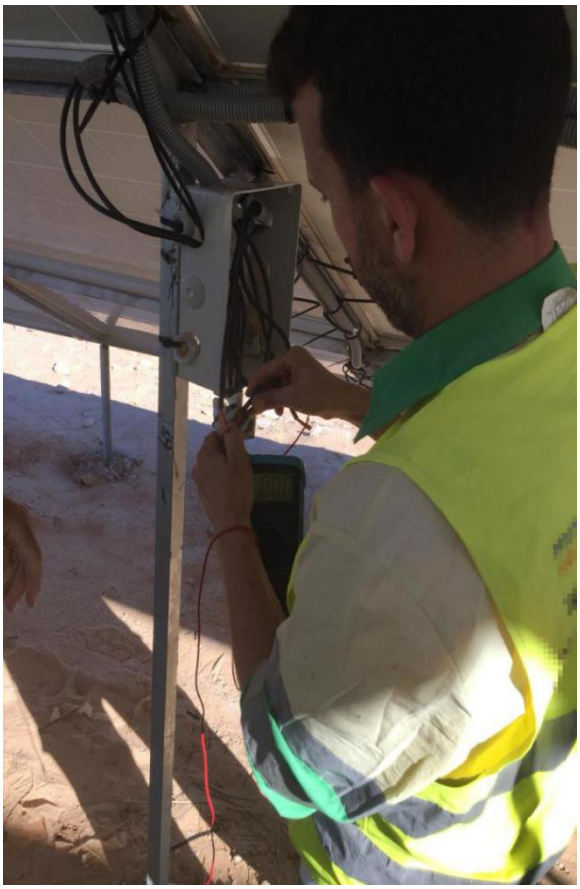
Specification		
Model: AS		**50296-50**
Rated Power		5000W
Battery Voltage		96V
Size(L*W*Hmm)		620*400*181
Packing Size(L*W*Hmm)		700*485*265
N.W.(kg)		27
G.W.(kg) (Carton Packing)		34
Parameter		
Input	DC Input Voltage Range	10.5-15VDC (Single battery voltage)
	AC Input Voltage Range	145VAC~275VAC
	AC Input Frequency Range	45Hz~65Hz
	AC Charging method	Three-stage (constant current, constanr voltage, floating charge)
Output	Efficiency	≥85%
	Output Voltage(Battery Mode)	110VAC±2% or 220VAC±2%
	Output Frequency(Battery Mode)	50/60Hz±1%
	Output Wave(Battery Mode)	Pure Sine Wave
	AC Output Voltage Range	220VAC±10%
	AC Output Frequency Range	Tracking Automatically
Inside Solar controller (Optional)	Charging Mode	PWM
	Charging current	50A
	PV Input Voltage Range	120V-176V
	Max PV Input Voltage(At 25℃)	200V
	PV Array Maximum Power	5600W
Working Mode		Battery First/AC First/Saving Energy Mode
AC Charging current (selectable)		0~30A
Transfer Time		≤4ms
Display		LCD
Thermal method		Cooling fan in intelligent control
Battery Type (selectable)	LEAD	harge Voltage：14V；Float Voltage：13.8V（Single battery voltage，x2 for 24V; x4 for 48V, x8 for 96V）
	OP-LE	arge Voltage：14.2V；Float Voltage：13.8V（Single battery voltage，x2 for 24V; x4 for 48V, x8 for 96V
	LITHIUM	harge Voltage：13V；Float Voltage：12.6V（Single battery voltage，x2 for 24V; x4 for 48V, x8 for 96V）
	Remark	The charging parameters of other types battery can be user-defined
Protection		Over-load / Over-discharge / Short circuit / High temperayure / Reverse polarity
Communication		RS232/RS485（Optional）
Environment	Noise	≤55dB
	Temperature	-10℃~40℃
	Humidity	0~95%(No condensation)

YANGZHOU BRIGHT SOLAR SOLUTIONS CO.,LTD

MOROCCO CLIENT ORDERED 30SETS SOLAR PWOER SYSTEM

They have their own working team and the below pictures show the Installation on site.

YANGZHOU BRIGHT SOLAR SOLUTIONS CO.,LTD



YANGZHOU BRIGHT SOLAR SOLUTIONS CO.,LTD

BR Solar, Your First & Best Choice!

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