

IGUWORLD SOLAR
Renewable energy and Backup Systems



IGU

**ENGINEERING CONSTRUCTION
PROCUREMENT & INSTALLATION OF INVERTER,
SOLAR FARMS, SOLAR STREET LIGHT AND SOLAR BOREHOLES**



WHO WE ARE

IGUWORLD SOLAR is Nigeria's frontline renewable energy company, committed to providing affordable and reliable solar energy solutions for households and businesses across Africa.

A good number of businesses in Nigeria spends upwards 40% of their profits to meet their basic power needs. We exist to solve this Problem. We are committed to increasing the productivity of businesses and providing comfort to millions of households by offering uninterrupted power supply through our solar and inverter systems.

We are well renowned for our deployment of top-notch solar Products, and we are wholesomely driven by our organizational values of Excellence, integrity, customer-centricity and accountability.



MISSION STATEMENT

we remain committed to provide innovative, cost effective, environmentally friendly reliable power and renewable energy solution to Everyone.
we specialize in providing viable alternative Electricity.

COMMITMENT AND INTEGRITY

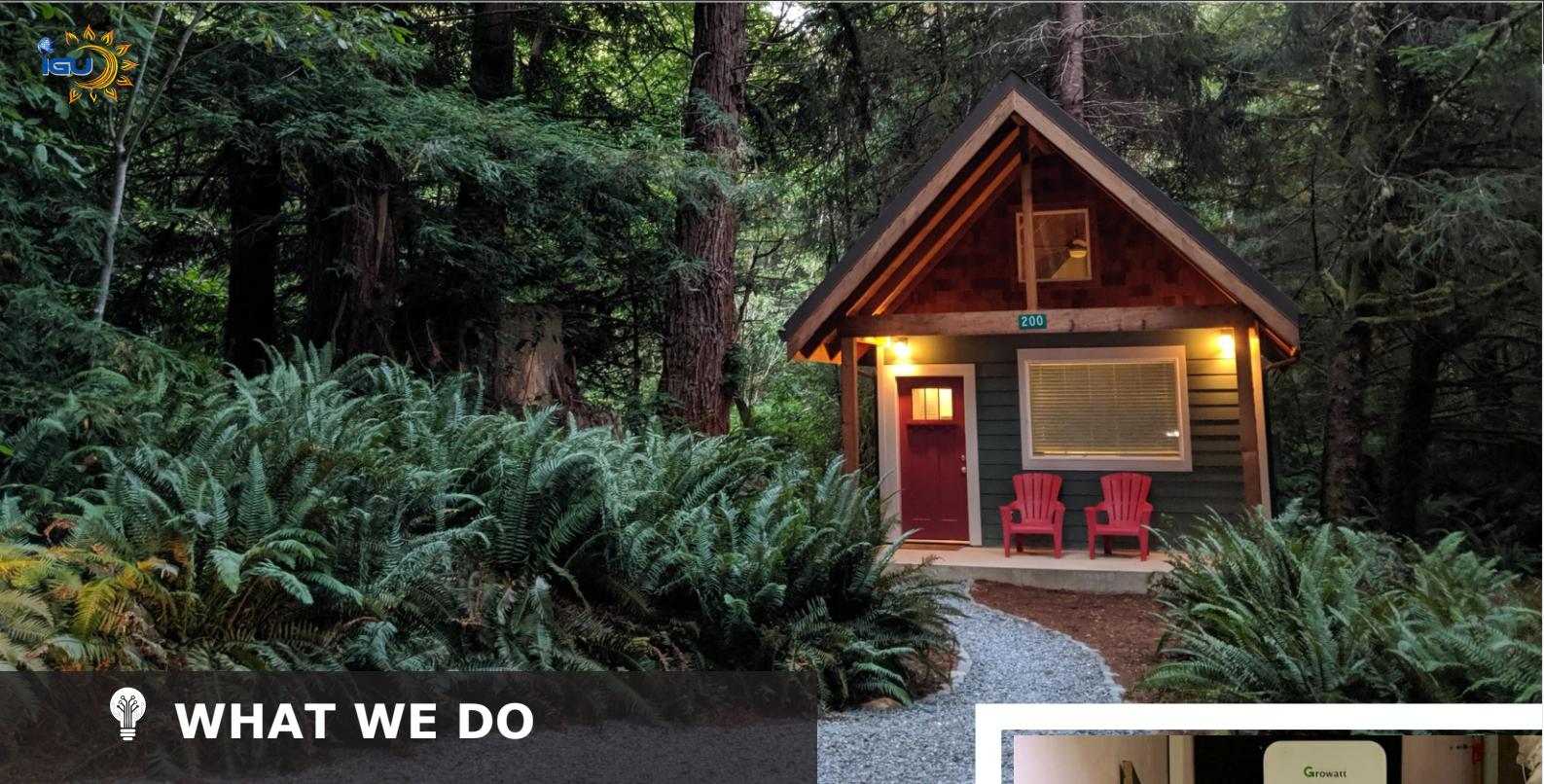
We move as a team and help each other including our customers. Our aim is to be very professional, reliable, and honest and be accountable. We set standards and abide by them and behave ethically. We strive to maintain a workplace built on mutual values, trust and goodwill..

QUALITY SERVICE

We Provide affordable uninterrupted power supply to households and business organization across Africa.

CORE VALUES

- Excellence
- Integrity
- Customer-Centricity
- Accountability



WHAT WE DO

We offer sales, installation, repair, maintenance, of Inverters, Batteries and Solar Panels.

We are specialized in the sales installation and maintenance of Inverter Ups, Batteries, solar panels, Charge controller, Solar water-pump, solar streetlights, and solar water heater, and provides alternative energy services for homes, schools, banks, churches and large industrial electrical equipment supplies.



Our Capabilities

- Solar system design and installation
- Inverter system sizing and installation
- Solar water supply system design and deployment
- Solar boreholes and water reticulation system
- Solar street lighting solution
- Inverters system repair and maintenance
- Provide UPS systems for servers and computers (ICT installation)
- Bank ATM power backup solutions
- Solar billboard installation
- Renewable energy consultancy and training





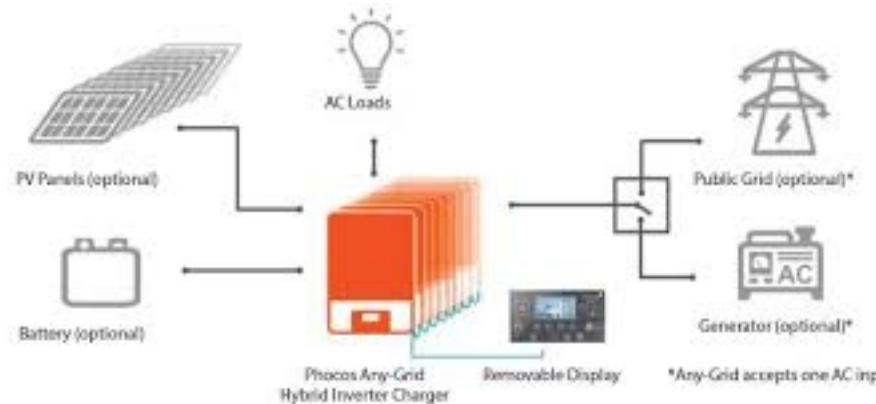
BENEFITS OF SOLAR ENERGY



- Saves money; Solar inverters helps cutdown on diesel, fuel and electricity costs.
- Create Jobs and other economic benefits; Renewable energy already supports thousands of jobs in Nigeria.
- Reduces Co2 Emmission, helps cut down carbon foot prints, Produces no noise, no pollution, Inverter and solar panels are, Trouble free, user friendly Source of power
- Stable Electricity: solar inverters produces 24/7 uninterrupted inexhaustible electricity that surpasses energy demands. Solar & Inverter can run Servers, Security Systems, Garage Doors, Electronic Gates, Lights,Fans, TVs Audio/Video Systems, Water Pumps, Refrigerators, Air Conditioners, Washing machines, incubators, equipments, Microwave etc.
- Provide individual energy independence: one of the coolest things about having your own renewable source of energy is that you're independent of the utility company. This means everyone else could be experiencing a blackout but you're using the power of the sun to keep cool.
- Solar Power is good for water pumping as it provides stable, Clean and Drinkable water for the community



Inverters



To clarify what an inverter it is essential for people to appreciate why this vital device seems to be in use for various applications.

An inverter converts the direct current or DC electricity from sources such as batteries or fuel cells to alternating current (AC) electricity. The inverter's design is to produce any voltage. In particular, it can operate alternating current equipment designed for mains operation, or rectified provide a direct current of any voltage desired for specific applications.

Inverters can play a crucial role in any solar energy system, and they are critical in most projects. An inverter's primary function is to convert direct current (DC) output into alternating current (AC). AC is the standard used by all commercial appliances.

To power your basic loads like Lights, TV, fan, CCTV and other small gadgets at home/office you can consider going for systems like the 1kva, 1.5kva, 1.7kva, 2kva or 2.5kva, also

To power your basic loads like Lights, TV, fan, CCTV and others like the Freezer, fridge, washing machine will require a minimum of a 3.5kva system, if you want to power including your AC, you can opt for the 5KVA, 7.5KVA, 10KVA system and above.



2.5KVA SYSTEM INSTALLATION



3.5KVA SYSTEM INSTALLATION



SYSTEM INSTALLED WITH LITHIUM BATTERY





Pure Sinewave Inverters Hybrid Inverters



Felicitysolar®



We have got various brands of inverters available from 1KVA to 100KVA in pure sinewave and in Hybrid to suite your budget and Electricity needs.



Hybrid Inverters

3500VA/48V, 5000VA/96V,
7500VA/120V, 10KVA/180V



Product Feature

- Sine wave, online and offline systems.
- DSP based designs pure sine wave, built in MPPT charge controller
- Maximum preference to solar power
- Most advanced LCD display with in-built DC and AC energy meter
- USB/ Ethernet based monitoring with 30days data storage
- Compactable with all PV arrays having different number of cells
- Tested as per IEC 61683 and IEC 60068-2-(1, 2, 14, 30) standards.
- Robust design 10yrs product life, 1yrs warranty

INSTRAPOWER Inverters



Hybrid inverter solar system



- *Touch screen LCD Display:- Input voltage & Frequency, Output Voltage & Frequency, Load % Charging Current, Battery Voltage, UPS Status
- *Active Power Factor Correction:- DSP Controller,
- *Reduces input AC Current to Half in comparison to SCR Charge
- *Customization Available
- *Battery level display
- *Battery option (50Ah-225AH)
- *Single Card Including Inverter Charger & Power Design:-
- *All in One single Card with DSP controller
- *Communication:- SNMP/Ethernet, RS232, USB
- *Parallel Card and no Parallel card option
- Unity Power Factor on Full Load,



GROWATT SPF 3500-5000 ES

Growatt SPF 3500-5000 ES is 230VAC output voltage off-grid inverter for backup power and self-consumption application, maximum PV input voltage up to 450VDC. also it can work without battery to saving system investment cost.



Growatt 5KW 5KVA SPF 5000ES 5000W 3500W 60A/80A MPPT Solar Charge Controller AC220V PV450V Off Grid Solar Inverter

Brand Name:Growatt
Model Number:SPF 3500 ES; SPF 5000 ES
Input Voltage:120VDC
Output Voltage:230Vac±5%
Output Current:80A
Output Frequency:50/60Hz
Output Type:Single, Multiple
Size:485*333*135mm
Type:DC/AC Inverters
Inverter Efficiency:>93%
Certificate:CE
Warranty:2 years
Weight:12kg

Selling Units:Single item
Single package size: 62X42.5X23 cm
Single gross weight:14.500 kg

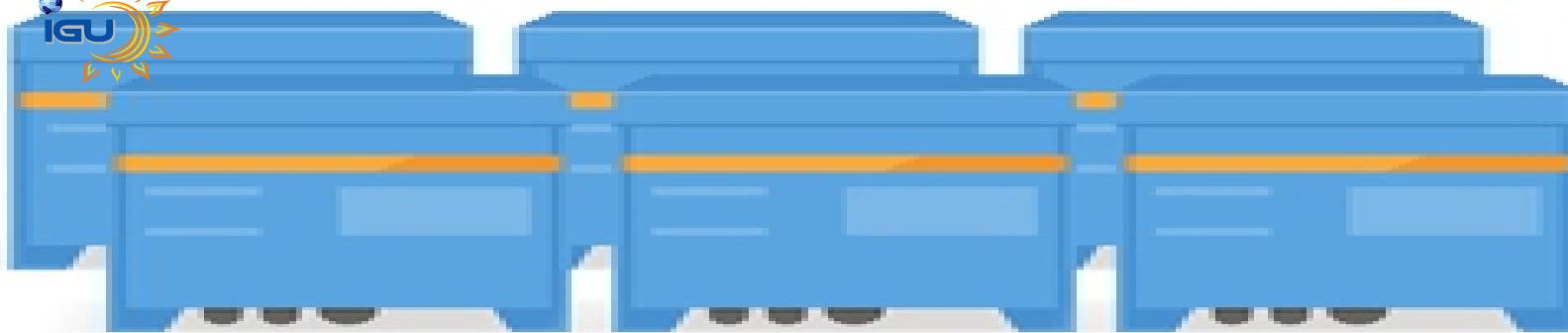


TECHNICAL PARAMETER



Inverters

Datasheet	SPF 3500 ES	SPF 5000 ES
Battery Voltage		48VDC
Battery Type		Lithium/Lead-acid
INVERTER OUTPUT		
Rated Power	3500VA/ 3500W	5000VA/ 5000W
Parallel Capability		Yes, 6 units maximum
AC Voltage Regulation (Battery Mode)		230VAC ± 5% @ 50/60Hz
Surge Power	7000VA	10000VA
Efficiency (Peak)		93%
Waveform		Pure sine wave
Transfer Time		10ms typical, 20ms Max
SOLAR CHARGER		
Maximum PV Array Power	4500W	6000W
MPPT Range @ Operating Voltage		120VDC ~ 430VDC
Number of Independent MPP Trackers/ Strings Per MPP Tracker		1/1
Maximum PV Array Open Circuit Voltage		450VDC
Maximum Solar Charge Current	80A	100A
AC CHARGER		
Charge Current	60A	80A
AC Input Voltage		230 VAC
Selectable Voltage Range		170-280 VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)
Frequency Range		50Hz/60Hz (Auto sensing)
PHYSICAL		
Protection Degree		IP20
Dimension (W/H/D)	330/485/135mm	330/485/135mm
Net Weight	11.5kgs	12kgs
OPERATING ENVIRONMENT		
Humidity		5% to 95% Relative Humidity(Non-condensing)
Altitude		<2000m
Operating Temperature		0°C - 55°C
Storage Temperature		-15°C - 60°C



Quattro

Multifunctional

Similar to the MultiPlus, the Quattro is also a combined inverter and charger. Additionally it can accept two AC inputs and automatically connect to the active source. Its many features include a true sine wave inverter, adaptive charging, hybrid PowerAssist technology plus multiple system integration features such as three or split phase operation and parallel operation. Models: 3000VA, 5000VA, 8000VA, 10000VA, 15000VA



Remote Monitoring and Control

When coupled with a GX device (e.g. Cerbo GX) you can monitor and control your Quattro and system or systems' locally (LAN) or remotely via the internet from anywhere in the world, using the free VRM app and free VRM portal website. Access can be from a phone, tablet, laptop or PC for multiple operating systems. There is no end to the level of control, from adjusting your Quattro to auto starting a backup generator and more



TECHNICAL PARAMETER



Inverters

Quattro					
	12/3000/120-50/50 24/3000/70-50/50	12/5000/220-100/100 24/5000/120-100/100 48/5000/70-100/100	24/8000/200-100/100 48/8000/110-100/100	48/10000/140-100/100	48/15000/200-100/100
PowerControl / PowerAssist	Yes				
Integrated Transfer switch	Yes				
AC inputs (2x)	Input voltage range: 187-265 VAC				
Maximum feed through current (A)	2x 50	2x100	2x100	2x100	2x100
INVERTER					
Input voltage range (V DC)		9,5 – 17V	19 – 33V	38 – 66V	
Output (1)		Output voltage: 230 VAC ± 2%		Frequency: 50 Hz ± 0,1%	
Cont. output power at 25°C (VA) (3)	3000	5000	8000	10000	15000
Cont. output power at 25°C (W)	2400	4000	6400	8000	12000
Cont. output power at 40°C (W)	2200	3700	5500	6500	10000
Cont. output power at 65°C (W)	1700	3000	3600	4500	7000
Peak power (W)	6000	10000	16000	20000	25000
Maximum efficiency (%)	93 / 94	94 / 94 / 95	94 / 96	96	96
Zero load power (W)	20 / 20	30 / 30 / 35	60 / 60	60	110
Zero load power in AES mode (W)	15 / 15	20 / 25 / 30	40 / 40	40	75
Zero load power in Search mode (W)	8 / 10	10 / 10 / 15	15 / 15	15	20
CHARGER					
Charge voltage 'absorption' (V DC)	14,4 / 28,8	14,4 / 28,8 / 57,6	28,8 / 57,6	57,6	57,6
Charge voltage 'float' (V DC)	13,8 / 27,6	13,8 / 27,6 / 55,2	27,6 / 55,2	55,2	55,2
Storage mode (V DC)	13,2 / 26,4	13,2 / 26,4 / 52,8	26,4 / 52,8	52,8	52,8
Charge current house battery (A) (4)	120 / 70	220 / 120 / 70	200 / 110	140	200
Charge current starter battery (A)	4 (12V and 24V models only)				
Battery temperature sensor	Yes				
GENERAL					
Auxiliary output (A) (5)	25	50	50	50	50
Programmable relay (6)	3x	3x	3x	3x	3x
Protection (2)	a-g				
VE.Bus communication port	For parallel and three phase operation, remote monitoring and system integration				
General purpose com. port	2x	2x	2x	2x	2x
Remote on-off	Yes				
Common Characteristics	Operating temp.: -40 to +65°C				
Maximum altitude	Humidity (non-condensing): max. 95% 3500 m				
ENCLOSURE					
Common Characteristics	Material & Colour: aluminium (blue RAL 5012) Protection category: IP 21				
Battery-connection	Four M8 bolts (2 plus and 2 minus connections)				
230 V AC-connection	Screw terminals 13 mm ² (6 AWG)	Bolts M6	Bolts M6	Bolts M6	Bolts M6
Weight (kg)	19	34 / 30 / 30	45 / 41	51	72
Dimensions (hxwxd in mm)	362 x 258 x 218	470 x 350 x 280 444 x 328 x 240 444 x 328 x 240	470 x 350 x 280	470 x 350 x 280	572 x 488 x 344
STANDARDS					
Safety	EN-IEC 60335-1, EN-IEC 60335-2-29, EN-IEC 62109-1				
Emission, Immunity	EN 55014-1, EN 55014-2, EN-IEC 61000-3-2, EN-IEC 61000-3-3, IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3				
Road vehicles	12V and 24V models: ECE R10-4				
Anti-islanding	See our website				
1) Can be adjusted to 60 HZ. 120 V models available on request	3) Non-linear load, crest factor 3:1				
2) Protection key:	4) Up to 25°C ambient				
a) output short circuit	5) Switches off when no external AC source available				
b) overload	6) Programmable relay that can a.o. be set for general alarm, DC under voltage or genset start/stop function				
c) battery voltage too high	AC rating: 230 V / 4 A				
d) battery voltage too low	DC rating: 4 A up to 35 VDC, 1 A up to 60 VDC				
e) temperature too high					
f) 230 VAC on inverter output					
g) input voltage ripple too high					

SmartSolar Charge Controllers with VE.Can interface

MPPT250/70VE.Can up to MPPT250/100VE.Can



**SmartSolar Charge Controller
MPPT250/100-Tr VE.Can
with optional pluggable display**



**SmartSolar Charge Controller
MPPT250/100-Tr VE.Can
without display**



**Bluetooth sensing
Smart BatterySense**



**Bluetooth sensing
BMV712 Smart Battery Monitor**



Bluetooth sensing SmartShunt

Ultra-fast Maximum Power Point Tracking (MPPT)

Especially in case of a clouded sky, when light intensity is changing continuously, an ultrafast MPPT controller will improve energy harvest by up to 30% compared to PWM charge controllers and by up to 10% compared to slower MPPT controllers.

Advanced Maximum Power Point Detection in case of partial shading conditions

If partial shading occurs, two or more maximum power (MPP) points may be present on the power-voltage curve. Conventional MPPTs tend to lock to a local MPP, which may not be the optimum MPP.

The innovative SmartSolar algorithm will always maximize energy harvest by locking to the optimum MPP.

Outstanding conversion efficiency

No cooling fan. Maximum efficiency exceeds 99 %.

Flexible charge algorithm

Fully programmable charge algorithm, and eight preprogrammed algorithms, selectable with a rotary switch (see manual for details).

Extensive electronic protection

Overtemperature protection and power derating when temperature is high.

PV short circuit and PV reverse polarity protection.

PV reverse current protection.

Bluetooth Smart built-in

The wireless solution to set up, monitor, update and synchronise SmartSolar Charge Controllers.

Internal temperature sensor and optional external battery voltage, temperature and current sensing via Bluetooth

A Smart Battery Sense a BMV 712 Smart Battery Monitor or a SmartShunt can be used to communicate battery voltage and temperature (and current, in case of a BMV 712 or a SmartShunt) to one or more SmartSolar Charge Controllers.

VE.Direct or VE.Can

For a wired data connection to a Color Control GX, other GX products, PC or other devices

Synchronized parallel charging with VE.Can or Bluetooth

Up to 25 units can be synchronized with VE.Can, and up to 10 units with Bluetooth.

Fully discharged battery recovery function

Will initiate charging even if the battery has been discharged to zero volts.

Will reconnect to a fully discharged Li-ion battery with integrated disconnect function.

VE.Can the multiple controller solution

Up to 25 units can be synchronized with VE.Can

Remote on off

To connect for example to a VE.BUS BMS.

Programmable relay

Can be programmed to trip on an alarm, or other events.

Optional: SmartSolar pluggable LCD display

Simply remove the rubber seal that protects the plug on the front of the controller, and plug-in the display.



SmartSolar pluggable display





Tubular Wetcell Battery



Wet cell batteries are extra strong and durable, it is in a class of its own, you will enjoy long lasting power backup all the time. We have various brands of tubular Batteries specially designed to provide comfortable and hassle-free life. Their impeccable functioning, outstanding design and powerful performance are as a result of the rigorous research & development and most innovative technology being used in the manufacturing process.

Inverter Tubular Battery is specially designed for optimum performance, very long life, and high reliability. These are eminently suitable for a wide range of applications. Specification: Perfect Match for your Inverter & UPS Systems. Performs under extreme conditions. Withstands Deep Discharge and Overcharge. Excellent protection against leakage and corrosion. Strong Containers/Covers. Intercell Welding reduces chances of accidental short-circuiting of cells. Special Lead Alloy Composition. Excellent charge acceptance. Large electrolyte volume. Microporous PVC Separators. These Batteries are specially designed to provide comfortable and hassle-free life. Their impeccable functioning, outstanding design and powerful performance are as a result of the rigorous research & development and most innovative technology being used in the manufacturing process.





Renewable energy and backup systems

AMARON QUANTA 200AH/12V SMF Battery

- ~**HIGHER LIFE** : Patented heavy duty lead alloy gives higher service Life
- ~**HIGHER POWER** : Unique "Radgrid" profile, ensuring more power for the same AH
- ~**FASTER RECHARGE** : Patented "Instacharge", paste recipe for excellent charge acceptance
- ~**HIGHLY RELIABLE** : Comes out of Amara Raja's world class manufacturing facility
- ~**AFTER SALES SUPPORT** : Prompt after sales support across Nigeria
- ~Available in Brown Carton and Orange Carton



AMARON QUANTA TALL TUBULAR BATTERY

Amaron inverter batteries are compatible with any brand of Inverters available. when you get an Amaron inverter battery, you enjoy a completely hassle-less experience as the battery uses a high heat resistance calcium/ultra modified hybrid alloy for its grids which makes it low maintenance

- High heat tolerance capacity makes it perfect for Nigerian Weather conditions
- Factory charged, has highest reserve capacity
- Charging is easy and happens fast
- Less prone to lose water and hence maintenance not needed that often
- Contains low lead reserve





Renewable energy and backup systems

Amara Raja

QUANTA
UNINTERRUPTED LIFE



Specification

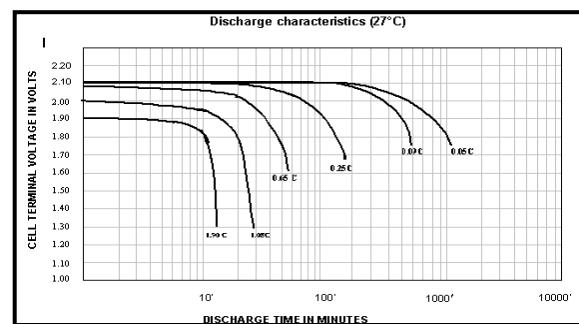
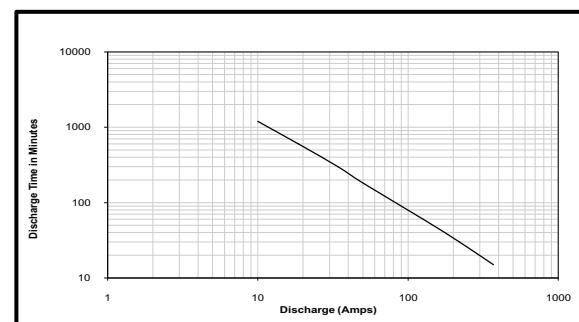
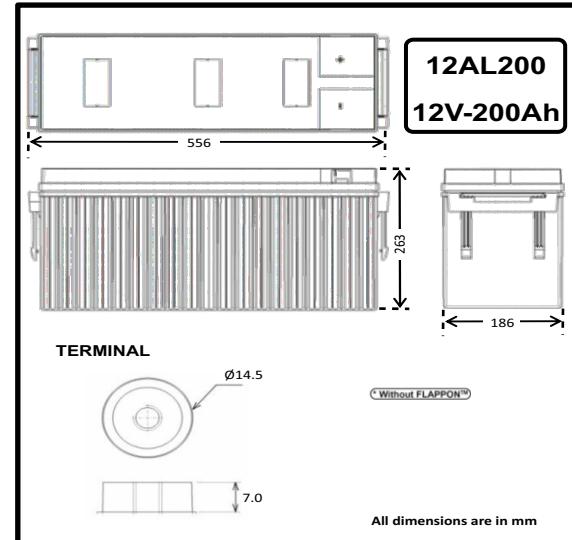
Nominal voltage	12 Volts
Rated capacity (C ₂₀ Hour rate)	200 Ampere Hour
Dimensions	Height Length Width
Weight ± 1.0 Kgs (approx.)	62.0 Kgs

Characteristics *

Capacity @ 81°F (27°C)	20 hour rate (10.0A) upto 10.5V 10 hour rate (18.6A) upto 10.5V 5 hour rate (34.3A) upto 10.2V 1 hour rate (126.6A) upto 9.6V 15 minute rate (370.4A) upto 7.8V	200.0 Ah 186.0 Ah 171.5 Ah 126.6 Ah 92.6 Ah
Internal resistance	Fully charged battery 81°F (27°C)	3.545 m
Capacity affected (Temperature at C ₂₀ hour rate)	104°F (40°C) 81°F (27°C) 32°F (0°C) 5°F (-15°C)	110 % 100 % 80 % 60%
Self discharge 81°F (27°C)	Capacity after 3 month storage Capacity after 6 month storage	88 % 78 %
Terminal Type	M6 x 15 mm Bolted	
Short circuit current	3655 A	

Constant current discharge rating amperes @ 27 °C *

ECV	DURATION											
	5 min	10 min	15 min	20 min	30 min	60 min	2 hr	3 hr	5 hr	8 hr	10 hr	20 hr
1.30	714.3	465.1	370.4	294.1	219.8	135.1	-	-	-	-	-	-
1.55	666.7	454.5	363.6	285.7	217.4	129.9	-	-	-	-	-	-
1.60	625.0	425.5	327.9	266.7	200.0	126.6	78.8	53.8	37.0	23.0	19.5	10.7
1.70	588.2	408.2	322.6	263.2	198.0	125.0	72.4	50.6	34.3	22.0	18.9	10.2
1.75	571.4	400.0	317.5	256.4	196.1	122.0	71.4	50.5	34.2	21.9	18.6	10.0
1.80	555.6	392.2	307.7	250.0	192.3	119.0	70.9	50.2	33.9	21.7	18.5	9.9



* The above data are average values and can be obtained within three charge/discharge cycles



GTA12-200



Adimaxcontrols Technical

ADIMAX 200AH AGM Battery

*DG (Deep Cycle GEL)series is pure GEL battery with 15~20 years floating design life,

*By using strong grids, high purity lead and patented Gel electrolyte, the DG series offers excellent recovery after deep discharge under frequent cyclic discharge use.

*Suitable for solar, CATV, marine, RV and deep discharge UPS, communication , and telecommunication.
*it is ideal for standby or frequent cyclic discharge applications under extreme environments.

DE BULL 230AH TUBULAR Battery

DE BULL Tubular German technology offer high reliability and performance.

The Battery is designed and manufactured according to DIN40736-2/IEC60896-11 Standards.

DE BULL series exceeds DIN40736-2/IEC60896-11 standard values with more than 20 years floating design life at 25°C and is even more suitable for cyclic use(solar/wind energy, traction etc) under extreme operating conditions.

ADVANTAGES			
Capacity @ C20	Dimensions(mm)	Application	
	Height(± 3mm)	Width(± 3mm)	Length(± 3mm)
150AH- 12V	410	190	505
180AH- 12V	410	190	505
200AH- 12V	410	190	505
230AH-12V	410	190	505





Battery



Nigeria's Indigenous renewable energy Provider



RITAR AGM Battery 150AH,180AH,200AH

- Extra thick plate with Pb-Ca-tin alloy.
- Sealed, maintenance-free operation.
- Patent design for terminal without leakage
- Anti-corrosion electrolyte ensure longer life
- 5yrs product life, one year warranty

RITAR BATTERY FEATURES.

FT (Front Terminal) Series is specially designed for telecom use with 10+ years design life in float service. By adopting a new AGM separator and centralized venting system, the battery can be installed in any position while maintaining high reliability.

The dimensions of the FT series are designed for 19" and 23" cabinet installation. It is suitable for UPS/EPS applications.

Batteries are manufactured by RITAR POWER.



*Suitable for solar, CATV, marine, RV and deep discharge UPS, communication , and telecommunication.

*it is ideal for standby or frequent cyclic discharge applications under extreme environments.

UU 12-200

LiFePO4 BATTERY



Convert Sunlight
into Energy



UU 12-200
Stores Energy



Supply Power to
Household Appliances

HOME BATTERY BACKUP

Home Battery Backup

Use UU 12-200 to avoid purchasing high-cost electricity.



Blue Carbon Technology 10KWH Solar System 48V 200Ah Solar Lithium Ion Battery Pack



Blue Carbon Technology 10KWH Solar System
48V 200Ah Solar Lithium Ion Battery Pack:

- (1) Standard Capacity: 200AH
- (2) Rated Voltage: 51.2V
- (3) Maximum Input current:100A;
- (4) Maximum output current: 100A;
- (5) Charging voltage: 58.4V;
- (6) Cut off: 2.5V single cell
- (7) Depth of discharge: up to 95%.

Description

US2000 C Plus 48V 2,4KWh PYLONTECH Lithium battery
The new US2000 C 48V 2,4KWh Lithium battery series is
a perfect solution for residential storage facilities, with
STANDARD 48v/50AH specification,
up to 90% usable capacity and a 4.5000 life-span warranty.

Features:

Vertical industry integration guarantees more than 6000 cycles with 90% DoD
Sleek, compact design fits your home environment
Provides up to 5KW with a single 2.4 KWh module
Modular design gives end-customers the ability to choose capacity
Compatible with most of the hybrid inverters available.
Easy fastening of the buckle that minimizes installation time and cost



IGUWORLD

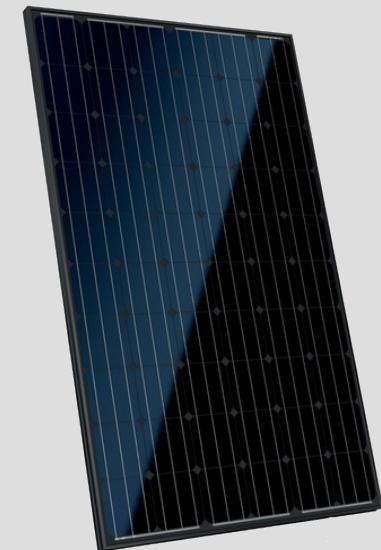


iguworld_solar

*Enjoy the Advantages of Solar Energy with IGUWORLD
We will help you with everything from designing a custom
solar system and installing solar panels to monitoring and
maintenance.*

*Iguworld only has the most experienced solar installers
around your area, so you can be rest assured your solar
Installation is in good hands.*

SOLAR PANELS



- High capacity charging current
- Compatible with any inverter
- 25yrs product life, 5yrs warranty

Monocrystalline solar panels,

150Watts, 280watts, 300watts and 360watts, 380watts, 400watts, 500watts

INSTRAPOWER 72-Cell high efficient solar modules
generates higher system yield by using
high-efficiency cells and its excellent weak
light performance, the module could withstand
a negative pressure up to 3800Pa and a
positive pressure up to 5400Pa, with the 40mm
frame design.



Mono

380W PERC Half-Cell Module JAM72S03 360-380/PR Series

Introduction

Assembled with high-efficiency PERC cells, the half-cell configuration of the modules offers the advantages of higher power output, better temperature-dependent performance, reduced shading effect on the energy generation, lower risk of hot spot, as well as



Higher output power



Lower temperature coefficient



Less shading effect



Better mechanical loading tolerance

Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty



Comprehensive Certificates

- IEC 61215, IEC 61730, IEC TS 62804, IEC 61701, IEC 62716, IEC 60068-2-68
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- OHSAS 18001: 2007 Occupational health and safety management systems
- IEC TS 62941: 2016 Terrestrial photovoltaic (PV) modules – Guidelines for increased confidence in PV module design qualification and type approval

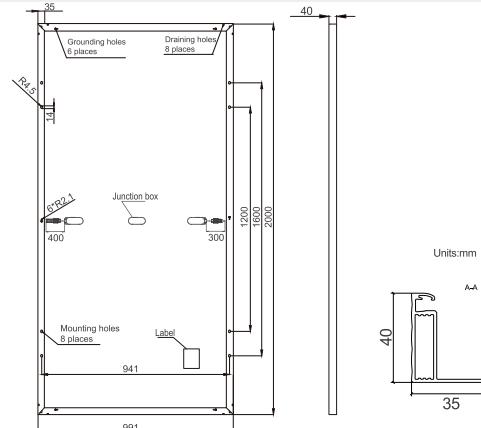
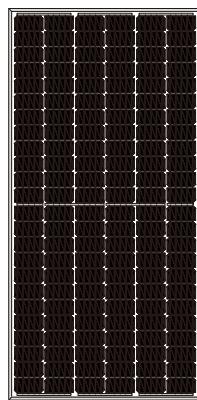


JA SOLAR

www.jasolar.com

Specifications subject to technical changes and tests.
JA Solar reserves the right of final interpretation.



MECHANICAL DIAGRAMS


Remark: customized frame color and cable length available upon request

SPECIFICATIONS

Cell	Mono
Weight	22.5kg±3%
Dimensions	2000mm×991mm×40mm
Cable Cross Section Size	4mm ²
No. of cells	144 (6×24)
Junction Box	IP68, 3 diodes
Connector	MC4 Compatible(1000V) QC 4.10-35(1500V)
Packaging Configuration	27 Per Pallet

ELECTRICAL PARAMETERS AT STC

TYPE	JAM72S03 -360/PR	JAM72S03 -365/PR	JAM72S03 -370/PR	JAM72S03 -375/PR	JAM72S03 -380/PR
Rated Maximum Power(Pmax) [W]	360	365	370	375	380
Open Circuit Voltage(Voc) [V]	46.98	47.30	47.56	47.78	48.05
Maximum Power Voltage(Vmp) [V]	38.73	39.05	39.36	39.58	39.80
Short Circuit Current(Isc) [A]	9.87	9.92	9.97	10.03	10.09
Maximum Power Current(Imp) [A]	9.30	9.35	9.41	9.48	9.55
Module Efficiency [%]	18.2	18.4	18.7	18.9	19.2
Power Tolerance	0~+5W				
Temperature Coefficient of Isc(α_{Isc})	+0.051%/°C				
Temperature Coefficient of Voc(β_{Voc})	-0.289%/°C				
Temperature Coefficient of Pmax(γ_{Pmp})	-0.360%/°C				
STC	Irradiance 1000W/m ² , cell temperature 25°C, AM1.5G				

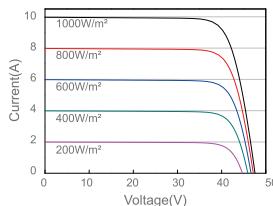
Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.

ELECTRICAL PARAMETERS AT NOCT

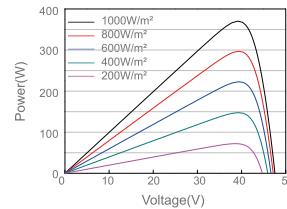
TYPE	JAM72S03 -360/PR	JAM72S03 -365/PR	JAM72S03 -370/PR	JAM72S03 -375/PR	JAM72S03 -380/PR	Operating Conditions
Rated Max Power(Pmax) [W]	266	270	274	278	281	Maximum System Voltage 1000V/1500V DC(IEC)
Open Circuit Voltage(Voc) [V]	43.48	43.80	44.06	44.28	44.51	Operating Temperature -40°C~+85°C
Max Power Voltage(Vmp) [V]	35.81	36.11	36.37	36.59	36.81	Maximum Series Fuse 30A
Short Circuit Current(Isc) [A]	7.90	7.94	7.98	8.02	8.08	Maximum Static Load,Front 5400Pa
Max Power Current(Imp) [A]	7.44	7.48	7.53	7.58	7.64	Maximum Static Load,Back 2400Pa
NOCT	Irradiance 800W/m ² , ambient temperature 20°C, wind speed 1m/s, AM1.5G					NOCT 45±2°C
						Application Class Class A

CHARACTERISTICS

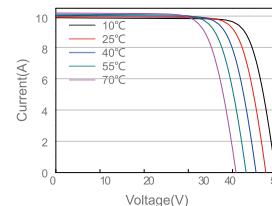
Current-Voltage Curve JAM72S03-370/PR



Power-Voltage Curve JAM72S03-370/PR



Current-Voltage Curve JAM72S03-370/PR





Solar Panels

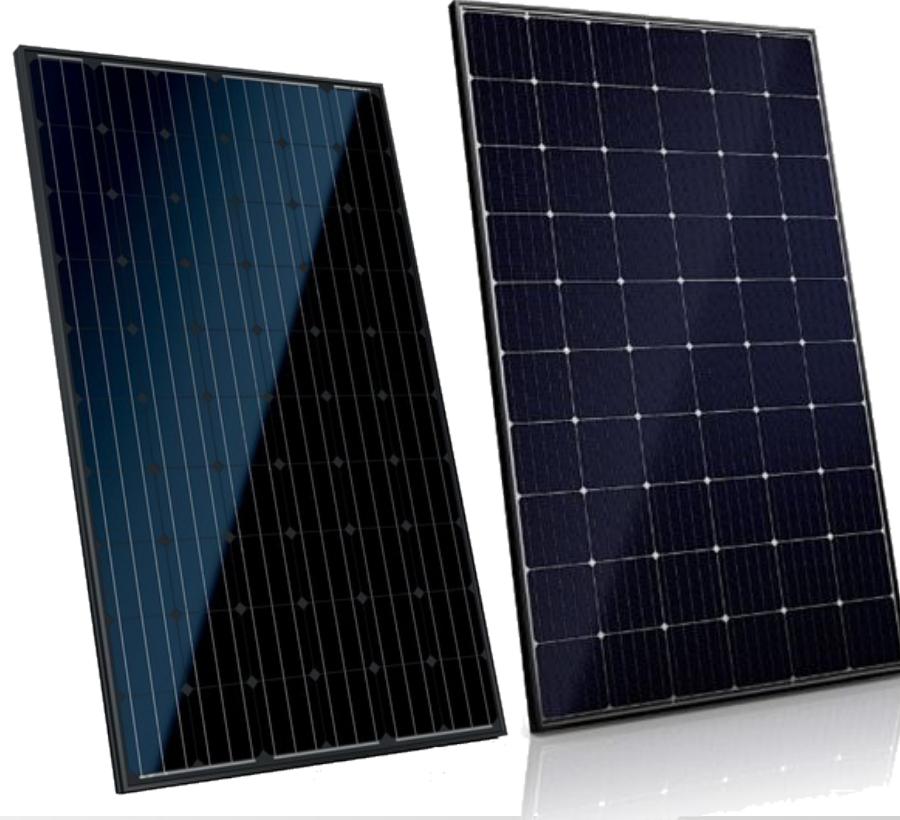


 Renewable energy and backup systems

INSTRAPOWER PREMIUM ALL BLACK

Compared with traditional modules, INSTRA smart modules achieved technology breakthrough on cell string level MPPT (Maximum power point Tracing) to get a guaranteed maximal power yield.

The 330WATTS Black panel is an attractive option for areas that don't get as much sunlight but still want to make good use of the light they do receive.



- High capacity charging current
- Compatible with any inverter
- 25yrs product life, 5yrs warranty

INSTRAPOWER Monocrystalline solar panels,
260watts, 330watts and 340watts

INSTRA 72-Cell high efficient solar modules generates higher system yield by using high-efficiency cells and its excellent weak light performance, the module could withstand a negative pressure up to 3800Pa and a positive pressure up to 5400Pa, with the 40mm frame design. our Product provides a 5-year



IGUWORLD



iguworld_solar

Modern solar street light used for dusk-to-dawn lighting operations, has embedded solar panel, inbuilt lithium-ion batteries, battery management system, night and motion sensors as well as automatic controls. The fully automatic device comes with LEDs, inbuilt and replaceable Lithium-ion battery and passive infrared (PIR) sensors. A typical solar street light is weather-proof and water-resistant, has low insect attraction rate and low glare and has a longer life. Bring all your solar street lighting Projects to us, we are capable of installing any volume and delivering your projects at ample time.



SOLAR STREETLIGHT



We do nationwide deployment and installation of solar AIO Streetlight Projects for estates, community streets, homes



Solar Street Lights/ Security light



*60W and 80W, 100W
Integrated Solar Streetlight*



1000 lumen security lights



100W upto 400W Security Light

Solar Streetlight Features

Modern All-in-One design; perfect combination of solar power, LED, battery, lighting sensor and timing control technology
Integrated design, easy to install, no hanging wires, less human labour

Reduced maintenance, no connection to electricity grid or meter required.

Water resistance and rust-proof structure, safe and reliable

Green energy, environment friendly, with zero pollution.

LAMP: 40 watts, 60 watts and 150 watts

INBUILT BATTERY: High performance and long lasting

SOLAR PANEL: Mono-crystalline PV cells

CHARGING TIME: 6hours under full sunshine

WORKING HOURS: 12 hours nightly,





Charge Controller



Renewable energy and backup systems



PWM And MPPT Charge Controllers

1. 360V/50A (PWM)
2. 360V/50A (MPPT)
3. 180V/45A charge controller
4. 180V/50A charge controller
5. 120V/45A charge controller
6. 120V/50A charge controller
7. 96V/45A charge controller
8. 96V/50A charge controller
9. 72V/50A charge controller
10. 48V/60A charge controller
11. 48V/30A charge controller
12. 24V/30A charge controller
13. 12V/24V/36V/48V/60A (PWM)

Solar Charge Controller

Performance features

- *MCU intelligent control technology, high performance;
- *Optional for Chinese and English menu, LCD+LED display mode, clearly to know the operation status.
- *Solar array and battery use the same positive system, multiple independent solar array input control;
- *Kinds of battery protection data setting;
- *Display battery voltage, battery charge current, internal chassis temperature, accumulate photovoltaic power generation function, accumulate battery power function, accumulate power consumption function, solar panel current for each strings etc.
- *Complete protection: reverse battery protection, battery overcharge protection, internal chassis cooling control (more than 45°C the fan will turn on), battery anti-reverse charge at night time function and alarm function;
- *Have history record and password protect function.
- *Have time display function.

- LCD display
- MPPT and PWM battery charging
- All necessary protections equipped
- Adjustable controlling parameter of the system





STABILIZER



Renewable energy and backup systems



RELAY AND SERVO STABILIZER

DE BULL STABILIZER

FEATURES

- *Increases useful life of equipments;
- *Reduces malfunctions rate of equipments;
- *Maintains a stabilized power supply;
- *Attenuates noise, interference and lightning;
- *Protects against under-voltages and over-voltage of the mains;
- *Operates in cases of overloading and overheating;
- *Signals events from the mains.

***INPUT 100-260VAC
OUTPUT 220±8%**





Renewable energy and backup systems



Solar Water Heater



AC AND DC SOLAR WATER PUMP

P550 (0.5HP 48V)

P600 (1HP 48V)

P1000 (1.5HP 72V)

P1300 (2HP 96V)



DC TO AC Converter



This allow your
AC water pump machine
to run on DC (solar panel)



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Load Selection Guidelines



Renewable energy and backup systems



1.5KVA/24V System



3.5KVA/48V System



5KVA/72V System



7.5KVA/120V System



10KVA/180V System

CAPACITY	NO OF BATTERIES	LIGHT	FAN	TV	SPEAKER	WASHING	REFRIGERATOR	A/C 1	A/C 2
1KVA/12V	1	3 - 5	1	1	1				
1.6KVA/24V	2	5 - 8	2	1	1				
2.5KVA/24V	2	8 - 12	3	1	1				
3.5KVA/48V	4	10 -15	4	2	1			1	
5.0KVA	6	15 - 20	5	2	2	1	1	1	1
7.5KVA	10	20 - 30	6	3	2	1	1	1	1
10KVA	15	20 - 30	7	3	2	1	1	1	1
15KVA	20	30 -40	7	4	2	1	2	1	1
20KVA	30	30 -40	8	4	3	1	2	2	3

*Load calculated are estimates only, N0 of Battery and load specification determine backup time.



5KVA/48V System

We can design and install a pocket friendly system suitable for your needs.
feel free to contact us



08188106748, 08188106998, 08039309184

TAX CLEARANCE



It pays to pay your taxes..

TAX CLEARANCE CERTIFICATE

TCC NO : 222136221321
TAX OFFICE : MSTO GARKI
DATE : 2022-04-27

Name of Company : IGU WORLD SYSTEMS LTD
RC No : 1489347
Date of Incorporation : 2018-04-25
TIN : 20882405-0001
FIRS ID : 2101110101321
Business Address : house 23 prince and princess g

Business Status : Commenced Business 2020-01-01



This is to certify that the above named company has rendered Income Tax, Value Added Tax, Information Technology Development Levy, Education Tax, as well as other tax returns and paid the assessed taxes in accordance with the relevant tax laws for all years including the past three assessment years as detailed hereunder.

	Assessment Year 2019	Assessment Year 2020	Assessment Year 2021
Turnover	NGN 0.00	NGN 37,763,242.00	NGN 37,763,242.00
Assessable Profit/Loss	NGN 0.00	NGN 603,158.00	NGN 603,158.00
Total Profit	NGN 0.00	NGN 433,158.00	NGN 433,158.00
Tax Payable	NGN 0.00	NGN 129,947.00	NGN 197,921.00
Tax Outstanding (If Any)	NGN 0.00	NGN 0.00	NGN 0.00

Source of Income : Wholesale on a fee or contract basis
Other Comments : APPROVED
This Certificate Expires on : 2022-12-31

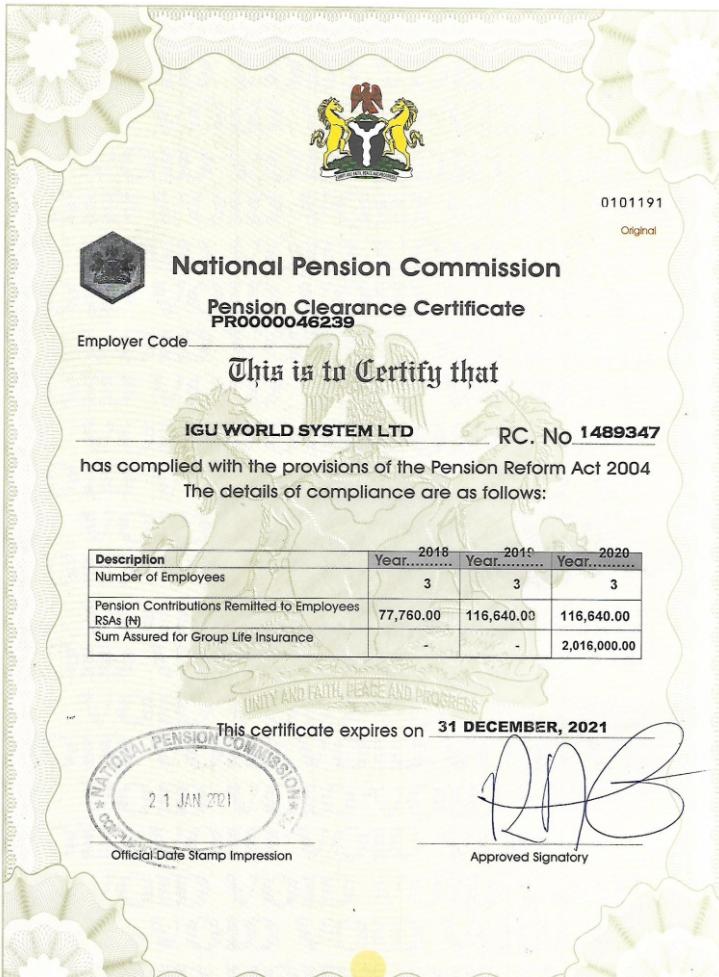


OLUWABAMIKE AROKOYO
Tax Controller

Official Stamp Impression

Name & Rank of Approving Officer

COMPANY DOCUMENTS



CAC

RC 1489347



**CORPORATE AFFAIRS COMMISSION
FEDERAL REPUBLIC OF NIGERIA**

Certificate of Incorporation

I hereby certify that

IGU WORLD SYSTEMS LTD

*is this day incorporated under the COMPANIES AND ALLIED
MATTERS ACT 1990 and that the Company is Limited By Shares.*

Given under my hand at Abuja this 25th day of April, 2018.



AZUKA OBIAGELI AZINGE

SEVERAL SUCCESSFUL INSTALLATIONS



Renewable energy and backup systems



2.5kva System Installation(Grid) 5kva System Installation(OffGrid)



SOLAR INSTALLATION AT MAIDUGURI



IGUWORLD JOBS



10KVA INSTALLATION
FOR URBAN SHELTERS



SOLAR WATER HEATER
INSTALLATION



13.5KVA INVERTER SYSTEM
INSTALLATION FOR CHURCH



40KVA OFF GRID SYSTEM
INSTALLATION



5KVA OFF GRID SYSTEM
POWERING A SCHOOL



60W ALL IN ONE SOLAR
STREETLIGHTS INSTALLATION





IGUWORLD JOBS



40KVA OFF GRID SYSTEM
INSTALLATION



5KVA OFF GRID SYSTEM



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IGUWORLD JOBS



**INVERTERS SYSTEM
INSTALLED AT MAIDUGURI**



**30KVA SETUP INSTALLED
FOR A HOME IN ABUJA**

**SEVERAL CAPACITIES OF
INVERTERS INSTALLED**



Contact Us

Abuja Showroom Address

Suite 013A-014A SAMFA PLAZA,
Plot 2055 Ndola Crescent, opp old CAC
By Ibro Hotel, Wuse zone 5, Abuja

08039309184, 08188106998, 08188106748



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IGU WORLD



08188106998, 08188106748



www.iguworldsolar.com



iguworldsolar@gmail.com



IGU WORLD SOLAR

Renewable energy and Backup Systems



Inverter

Battery

Solar Panels

Sales Installation and Maintenance



Automatic Voltage Regulator

Input 100-260VAC
Output 220±8%
Efficiency 100%

EXT-R-15000VA

Delay Undelay DELAY
ON OFF Power Bypass

Our Capabilities

- Solar Farm design and installation
- Inverter system sizing and installation
 - Solar water Heater installation
- Solar boreholes and water reticulation system
- Solar street lighting solution
- Inverters system repair and maintenance
- Provide UPS systems for servers and computers (ICT installation)
 - Bank ATM power backup solutions
 - Solar billboard installation
- Renewable energy consultancy and training

Contact Us



08188106748, 08188106998, 08039309184



iguworldsolar@gmail.com

Stable Electricity, Produces no noise, no pollution, Inverter and solar panels are Trouble free, user friendly Source of power, helps cut down carbon foot prints.

ENJOY 24/7 UNINTERRUPTED ELECTRICITY

013A SAMFA PLAZA, WUSE ZONE 5, ABUJA



Renewable energy and backup systems

The future of solar energy is Bright.