

ONE-STOP RESIDENTIAL

ENERGY STORAGE SOLUTION

itel Energy

YouTube: itel Energy
Facebook: itel Energy Global
LinkedIn: itel Energy Global

energy.itel-life.com

Subject to change without notice. **Version 3.0**

Enjoy Better Life



COMPANY PROFILE

About itel

For over a decade, itel has empowered families to enjoy better life through technology. Founded on the philosophy of "Enjoy Better Life", itel is a trusted smart life brand dedicated to making cutting-edge technology accessible and affordable for everyone. We democratize technology by bridging the digital divide, offering a diverse product portfolio that spans smartphones, accessories, appliances, laptops, and lifestyle products. Today, itel thrives in over 50 emerging markets worldwide, continuously enriching lives through innovative and user-friendly technology solutions.

About itel Energy

Itel Energy is your one-stop choice for residential energy storage solutions. We are passionate about creating a future powered by clean energy, and we believe that everyone deserves access to safe, efficient, and sustainable energy options. Our team brings over a decade of experience in the new energy and mobile internet industries, we leverage this combined expertise to develop innovative and user-centric energy storage solutions that meet the specific needs of families around the world.

Global Reach, Local Focus

At itel energy, we operate with a "glocal" mindset. We are a global brand with a strong commitment to understanding and catering to local user demands. Our team members possess deeper understanding of regional energy markets and consumer preferences, allowing us to develop solutions that are not just technologically advanced but also perfectly suited for the local context.

Employees Worldwide

16,000+

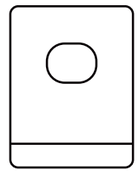
Testing centers **1000+** square meters

Headquarter **10,000+** square meters

R&D offices **650+** seats

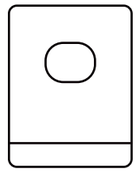
Exhibition hall **1000+** square meters





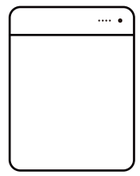
Hybrid Inverter

IPV-3K624S
IPV-12K48U
IHY-8KL3&IHY-12KL3
IPV-4K24U&IPV-6K48U



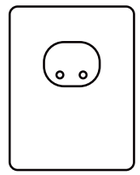
Off-Grid Inverter

IPV-1K512U&IPV-3K24U



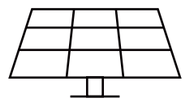
Battery

IPW-25100
IPL-51200&IPL-51280
IPW-51100&IPL-51100
IPL-51314Y



All-in-One

IESS-3K680N
IESS-05K10P



PV Modules

410W/P
550W/N



One-stop Residential Energy Storage Solution

SOLAR SOLUTION

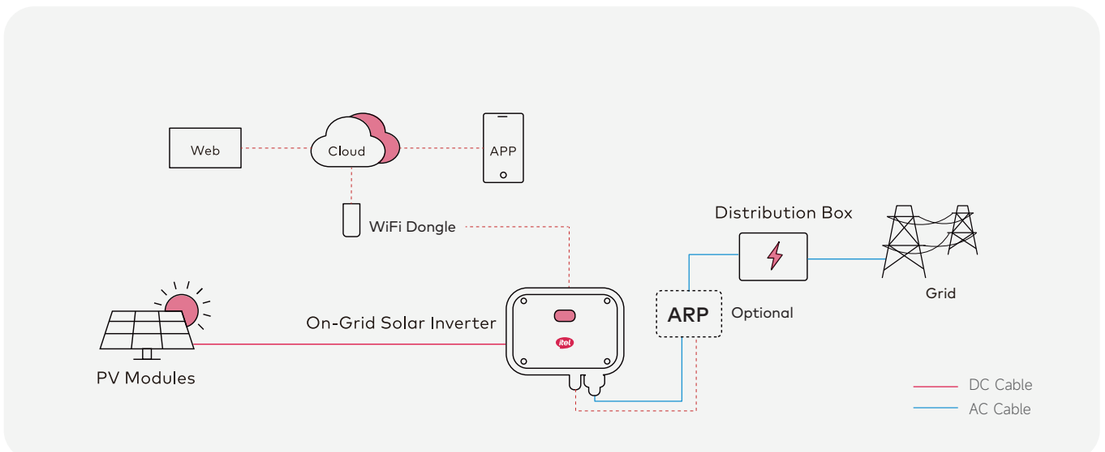
PV On-Grid Solution

Our PV On-grid solution employs state-of-the-art inverter technology to ensure efficient power generation and seamless grid integration. This solution includes intelligent monitoring and remote management features, providing round-the-clock optimal performance. Designed to adapt to both residential and utility-scale applications, our flexible solution facilitates a smooth transition to a sustainable, green energy future.

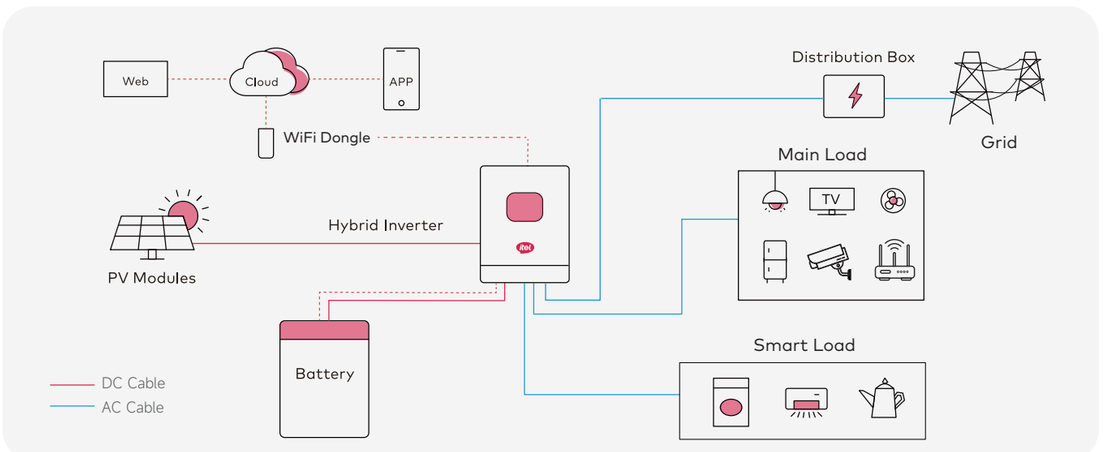
Energy Storage System Solution

Our energy storage system solution offers a comprehensive approach to energy management, ensuring stability and efficiency through advanced storage technology. With customizable configurations and intelligent dispatch capabilities, this solution optimizes peak load management, provides robust backup power, and enhances self-consumption efficiency. By choosing our energy storage solution, you are securing a more reliable and resilient energy future.

PV On-Grid Solution



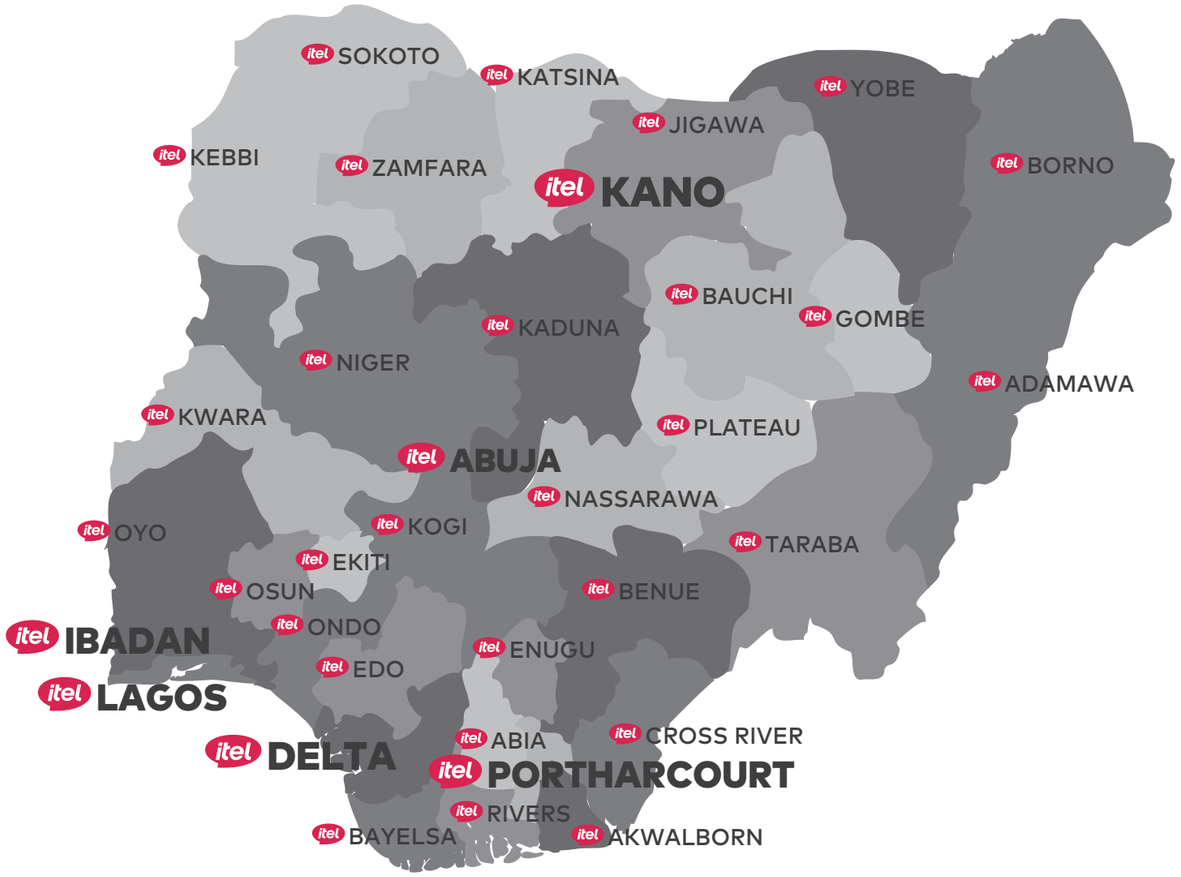
Energy Storage System



MAP OF SERVICE CENTER'S

itel Energy and Carlcare Together

Establish After-Sales Service Centers



Our Service Centers covers 36 states of Nigeria with 5 states service centers in Abuja, Lagos, Kano, Ibadan and PortHarcourt.

467 contract service centers are located all over Nigeria

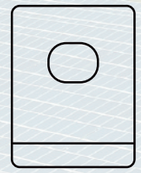
itel Energy Official Service Centers in Nigeria

Shop Name	Address	Phone
Carlcare-CV (Computer Village)	No. 5, (Municipal No7) Oba Akran Avenue, Ikeja, Lagos	+234-9096015561
Carlcare-Abuja	1st Floor,NO.16 Gwani Street, off IBB Way,Wuse Zone 4, Abuja, Abuja, Nigeria	+234-8185930466
Carlcare-Port-harcourt	14, Old Aba Road, by Woji junction, Port Harcourt, Rivers, Nigeria	+234-9124339932 +234-9155314772
Carlcare-Warri	13 Airport Road, opposite Union Bank, Nige ria,Ekurede Urhobo, Warri 332104, Delta	+234-7080632363
Carlcare-Benin	No.5-7, Isekhere Street, Off Ibewe Rd, Ring Rd, Benin, Benin, Nigeria	+234-7031855928 +234-8172951002
Carlcare-Kano	No.18,Post Office Road, Kano, Nigeria	+234-8096969680
Carlcare-Ibadan	plot 5,Old Dugbe Layout former wema bank building	+234-9116414694
Carlcare-Onitsha	No.11 Enugu Road Onitsha Anambra State 2nd Floor	+234-8101453822 +234-8177250277
Carlcare-Lagos Victoria Island (3chub)	16 Saka Tinubu street, Victoria island, Victoria Island, Victoria Island, Nigeria	+234-8066153123
Carlcare-Lagos Victoria Island (Slot)	13B Saka Tinubu street, Victoria island, Victoria Island, Lagos, Nigeria	+234-9115031138
ASC-M-Breva Enterprises Limited Lagos	Suites 9&10, Sultan Shopping Mall, 2B Ikosi Road, Ketu, Lagos	+234-7085756114
ASC-M-Orinox Accessories Enugu	35 Okpara Avenue, GRA 400102, Enugu, Nigeria.	+234-7062318087 +234-7082560384
ASC-M-Orinox Accessories Uyo	18, Ikot Ekpene Road, Uyo , Akwa, Ibom State.	+234-7044078076
ASC-M-Orinox Accessories Aba	38B St Michaels Road,, Aba, Abia State, Nigeria	+234-7044078076
ASC-M-Intaj Dynamic	@Coca-Cola Road, Adjacent former Amifas Supermarket, Apinite, Saki	+234-08171399198
ASC-M-Innive Technologies Ikotun	No 3 Idimu road Ikotun Lagos	+234-8025160660

itel Energy Official Service Centers in Nigeria

Shop Name	Address	Phone
ASC-M-Orinox Accessories Calabar	55 Marian Road By Old Ikang Calabar Cross River State	+234-9032132862
ASC-M-Haven Buddy Integrated Concept	Dotobues Building, Lalubu Road, Oke-ilewo, Abeokuta, Ogun State,Nigeria	+234-9019482698 +234-8103526085
ASC-M-Carosammy Concept Ltd	OG Winners Plaza 28 New Bridge Otukpo Road Makurdi. Suite D9	+234-8058020946
ASC-M-Adehero Service	Old help building, beside first bank, argebe bus-stop, Gbongan ibadan road. OSogbo	+234-8081902852
ASC-M-Tonijam Nig.Ltd	2nd floor,73,Best way , Opposite first bank,Iwo road,Ibadan,Oyo State, Nigeria.	+234-9063900356
ASC-M-E-Power Nig Ltd	Digital Square, No 20 Awolowo Way, Ikeja, Lagos State.	+234-9043972165
ASC-M-Kraaft Technology & Services	Ground Floor, No.20 Mbonu Ojike street, Ikenegbu, Owerri, Imo ,Nigeria.	+234-8141873204
ASC-M-Breva Enterprises Limited Ilorin	2nd Floor, Former Ostrich Bakery Building, 155 Ibrahim Taiwo Rd, Ilorin, Ilorin, Nigeria	+234-9139124408
ASC-M-Magic Brothers Communications Ltd.	Mez C10, Old Banex Plaza Wuse2 Abuja	+234-9011049789
ASC-M-Bluegate Bamboo enterprise	Suite C shop 25 Ajah Shopping mall by wema bank off alesh road ajah bus stop ajah Lagos	+234-08028188221
ASC-M-Delinks Matrix Ikorodu	Alabukun Plaza, 5, Lagos Road,Beside Fcmb, Opposite Ikorodu Brt Terminal, Ikorodu Bus Stop Ikorodu, Lagos	+234-8139352309 +234-9096600813
ASC-M-Delinks Matrix Agric	57/59 Flaykets House, Along Isawo Road, Adjacent NNPC, Agric, Ikorodu, Lagos.	+234-8132730218
ASC-M-New Moon Unique Link	1st Floor, Alpha and Omega Building, Queen Elizabeth Road, Mokola, Ibadan, Ibadan, Nigeria	+234-08022382853
ASC-M-Beecasual Ventures	Suite 13, 445 Plaza, Nnebisi Road, Opposite Zenith bank, close to FMC, Asaba	+234-8023277947
ASC-M-Innive Technologies Alaba	105 Olojo Drive, Ojo, Lagos	+234-8025160660

Hybrid Inverter



IPV-3K624S
IPV-12K48U
IHY-8KL3 | IHY-12KL3
IPV-4K24U | IPV-6K48U





3K624S SP-HYBRID

Product Features

High Efficiency
MPPT Tracking Efficiency 99.5%
Battery Mode Conversion Efficiency 92%

Intelligent Load Recognition
Intellgient Power Controll Algorithm
Self-adapting to Household Appliances

Powerful Performance
102%<Load<110%, 60s
110%<Load<130%, 10s
130%<Load<150%, 3s
Max Grid Input Voltage 380V

Saving Boost
Max. Charging Current up to 100A
Fully Charged Rapidly
Max. Discharging Current up to 156A
Run in Back Up Mode, Reduce Electricity Bill

Model	IPV-3K624S
Efficiency	
MPPT Tracking Efficiency	99.5%
Max. Battery Mode Conversion Efficiency	92%
PV Input	
Max. PV Input Power	5000W
Max. PV Input Voltage	500V
Start-Up Voltage	60V
MPPT Voltage Range	40V~450V
Max. Input Current	18A
MPP Trackers	1
AC Input	
Max. Grid Input Voltage	380Vrms
Nominal Voltage	220VAC
Input Voltage Range	90~280VAC
Max. AC Input Current	20A
Max. Input Power	4400W@60s
Nominal Operating Frequency	50Hz/60Hz
THDi	<3%
AC Output	
Nominal AC Output Power	3600W
Max. Output Apparent Power	6700VA
Nominal AC Output Voltage	220/230/240VAC
Total Voltage Harmonic Distortion	<3%
Max. AC Output Current	16A
Nominal AC Frenquency	50Hz/60Hz
Switch Time	10mS
Surge Power	5700W@200mS
Load Capacity of Motor	2HP
Overload Capacity	60S@102%<load<110%, 10S@110%<load<130%, 3S@130%<load<150%
Battery	
Battery Type	Lithium/Lead Acid
Rated Voltage	24V
Battery Voltage Range	21V-30.5V
Max. MPPT Charging Current	100A
Max. Mains/Generator Charging Current	100A
Max. Discharging Current	156A
General	
Dimensions D*W*H (mm)	95*285*420
Net Weight	6.4kg
Operating Temperature Range	-10-55℃, >45℃ Power Derating
Max. Operating Altitude	4000m, >1000m Power Derating
Communication	RS485/RS232
WIFI/Bluetooth	Support（Opitonal）
Diesel Generator Support	No
Dry Contact Support	Yes
Number of Parallel	No
Cooling Method	Intelligent Fan Cooling
Noise	<55dB
Authentication Level	IEC62109-1, IEC62109-2, IEC61683
Protection	
Ingress Protection	IP31
Overvoltage Protection	Yes
Overload Protection	Yes
Short Circuit Protection	Yes
Over Temperature Protection	Yes
Surge Protection	DC: TYPE III, AC: TYPE III



4~6kW SP-HYBRID

Product Features

High Efficiency

MPP Tracking Efficiency ≥99.9%
Battery Mode Conversion Efficiency ≥93%

Powerful Performance

150% Overload Capacity@10S
200% Overload Capacity@5S

Solid Quality & Service

IP54 Protection Design for Anti-Dust and Waterproof
3-Year Replacement

Model	IPV-4K24U	IPV-6K48U
Efficiency		
MPPT Tracking Efficiency	≥99.9%	
Max. Battery Mode Conversion Efficiency	≥93%	
PV Input		
Max. PV Input Power	4000W	6000W
Max. PV Input Voltage	500V	
Start-Up Voltage	80V	
MPPT Voltage Range	85V~450V	
Max. Input Current	15A	27A
MPP Trackers	1	
AC Input		
Max. Grid Input Voltage	380Vrms	
Nominal Voltage	230VAC	
Input Voltage Range	90-280VAC	
Max. AC Input Current	28A(Bypass Mode)	50A(Bypass Mode)
Nominal Operating Frequency	50Hz/60Hz	
THDi	<3%	
AC Output		
Nominal AC Output Power	4000W	6000W
Max. Output Apparent Power	4000VA	6000VA
Nominal AC Output Voltage	220V/230V/240V	
Total Voltage Harmonic Distortion	<3%	
Nominal AC Frequency	50Hz	
Switch Time	10mS(UPS);20mS(Applicances)	
Surge Power	8000W@5S	12000W@5S
Overload Capacity	105%-150%@10S,150%-200%@5S	
Battery		
Battery Type	Lead-acid/Lithium-ion/User Defined	
Rated Voltage	24V	48V
Battery Voltage Range	20V~30V	40V-60V
Max. MPPT Charging Current	120A	120A
Max. Mains/Generator Charging Current	100A	120A
Max. Discharging Current	160A	130A
General		
Dimensions D*W*H (mm)	120mm*347mm*445mm	
Net Weight	9.2kg	13kg
Operating Temperature Range	-10°C~+55°C, >45°C Power Derating	
Max. Operating Altitude	4000m, >2000m Power Derating	
Communication	WIFI/RS485//RS232/Dry Contact	
Diesel Generator Support	Yes,External ATS	
Smart Load Support	Yes,External Contactor	
Number of Parallel	No	12
Cooling Method	Intelligent Fan Cooling	
Noise	<60dB	
Authentication Level	IEC62109-1,IEC62109-2,IEC61683	
Protection		
Ingress Protection	IP54	
Overvoltage Protection	Yes	
Overload Protection	Yes	
Short Circuit Protection	Yes	
Over Temperature Protection	Yes	
Surge Protection	DC: TypeIII, AC: TypeIII	





12kW SP-HYBRID

Product Features

Dual Output

Support Smart Load and Main Load

High PV Input Power

Up to 16kW PV Input Power
Max. MPPT Charging Current up to 210A

High Efficiency

MPP Tracking Efficiency ≥99.5%
Battery Mode Conversion Efficiency ≥95%

Powerful Performance

105%-150% Overload Capacity@10S
150%-200% Overload Capacity@5S
Max Grid Input Voltage 380V

Solid Quality & Service

IP54 Protection Design for Anti-Dust and Waterproof
3-Year Replacement

Model	IPV-12K48U
Efficiency	
MPPT Tracking Efficiency	99.5%
Max. Battery Mode Conversion Efficiency	95%
PV Input	
Max. PV Input Power	16000W
Max. PV Input Voltage	500V
Start-Up Voltage	75V
MPPT Voltage Range	85V~450V
Max. Input Current	27A+27A
MPP Trackers	2
AC Input	
Max. Grid Input Voltage	380Vrms
Nominal Voltage(Opional)	220VAC/230VAC/240VAC
Input Voltage Range	90VAC-280VAC
Max. AC Input Current	90A(Bypass Mode)
Nominal Operating Frequency	50/60Hz
THDi	<3%
AC Output	
Nominal AC Output Power	12kW
Max. Output Apparent Power	12kVA
Nominal AC Output Voltage(Opitonal)	220VAC/230VAC/240VAC
Total Voltage Harmonic Distortion	<3%
Nominal AC Frenquency	50Hz
Switch Time	10mS(UPS);20mS(Applicances)
Surge Power	24kW@5S
Overload Capacity	105%-150%@10S,150%-200%@5S
Battery	
Battery Type	Lead-acid/Lithium-ion/User Defined
Rated Voltage	48V
Battery Voltage Range	40~60V
Max. MPPT Charging Current	210A
Max. Mains/Generator Charging Current	210A
Max. Discharging Current	250A
General	
Dimensions D*W*H	125mm*525mm*630mm
Net Weight	28.5kg
Operating Temperature Range	-10°C-55°C,>45°C Power Derating
Max. Operating Altitude	4000m,>2000m Power Derating
Communication	WIFI/RS485/CAN/RS232/Dry Contact
Diesel Generator Support	Yes
Smart Load Support	Yes
Number of Parallel	Single Phase:6 Three Phase:12
Cooling Method	Intelligent Fan Cooling
Noise	<60dB
Authentication Level	IEC62109-1,IEC62109-2,IEC61683
Protection	
Ingress Protection	IP54
Overvoltage Protection	Yes
Overload Protection	Yes
Short Circuit Protection	Yes
Over Temperature Protection	Yes
Surge Protection	DC: TypeIII, AC: TypeIII



8~12kW **3P-HYBRID**

Product Features

Multi-Function Output

Support On-Grid, Smart Load and Back-up Load

High PV Input Power

PV Input Power up to 16000W/24000W
Max. MPPT Charging Current up to 190A/250A

High Efficiency

MPP Tracking Efficiency ≥99.9%
Battery Mode Conversion Efficiency ≥97.5%

Powerful Performance

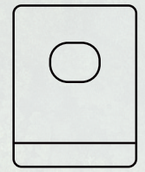
200% Overload Capacity@15S
Max Grid Input Voltage 380V

Solid Quality & Service

IP66 Protection Design for Anti-Dust and Waterproof
5-Year Replacement

Model	IHY-8KL3	IHY-12KL3
Efficiency		
MPPT Tracking Efficiency	99.9%	
Max. Conversion Efficiency (PV)	98%	
European Efficiency	97.5%	
PV Input		
Max. PV Input Power	16000W	24000W
Max. PV Input Voltage	1000V	
Start-Up Voltage	150V	
MPPT Voltage Range	200V~800V	
Max. Input Current	18A/18A	36A/18A
MPP Trackers	2	
AC Input/Output(On-Grid)		
Nominal Output Power	8000W	12000W
Max. Output Apparent Power	8800VA	13200VA
Nominal Output Voltage	380VAC/400VAC(3W+N+PE)	
Max. Output Current	13.3A	20A
Max. Grid Input Voltage	380Vrms(L-N)	
Output Voltage Range	180VAC~280VAC(L-N)	
Output Frequency Range	45Hz~65Hz	
Power Factor Adjustment Range	0.8 Leading to 0.8 Lagging	
Total Current Harmonic Distortion	<3%	
AC Output (Back up)		
Nominal Output Power	8000W	12000W
Max. Output Apparent Power	8800VA	13200VA
Peak Output Power	16000VA@15S	24000VA@15S
Nominal Output Voltage	220VAC/380VAC,230VAC/400VAC	
Max. Output Current	13.3A	20A
Nominal Output Frequency	50Hz/60Hz	
Total Voltage Harmonic Distortion	<3%	
Switch Time	10mS	
Overload Capacity	200%@15S	
Battery		
Battery Type	Lead-acid/Lithium-ion/User Defined	
Rated Voltage	48V	
Battery Voltage Range	40V~60V	
Max. MPPT Charging Current	190A	250A
Max. Mains/Generator Charging Current	190A	250A
Max. Discharging Current	190A	250A
General		
Dimensions D*W*H	256mm*475mm*683mm	
Net Weight	38kg	
Operating Temperature Range	-25~+60°C, >45°C Power Derating	
Max. Operating Altitude	4000m, >2000m Power Derating	
Communication	WIFI/RS485/CAN/Dry Contact	
Diesel Generator Support	Yes	
Smart Load Support	Yes	
Number of Parallel	12	
Cooling Method	Intelligent Fan Cooling	
Noise	<55dB	
Authentication Level	IEC62109-1, IEC62109-2, IEC61683, IEC62116, IEC61727	
Protection		
Ingress Protection	IP66	
PV Reverse-Polarity Protection	Yes	
Insulation Impedance Detection	Yes	
Residual Current Monitoring	Yes	
Overvoltage Protection	Yes	
Overload Protection	Yes	
Short Circuit Protection	Yes	
Over Temperature Protection	Yes	
Surge Protection	DC: TYPE II,AC: TYPE III	

Off-Grid Inverter



IPV-1K512U
IPV-3K24U



1.5-3kW SP-Off-Grid

Product Features

High Efficiency

Pure Sine Wave Inverter
MPP Tracking Efficiency ≥99.9%
Battery Mode Conversion Efficiency ≥93%

Solid Quality & Service

IP54 Protection Design for Anti-Dust and Waterproof
3-Year Replacement

Powerful Performance

150% Overload Capacity@10S
200% Overload Capacity@2S
Max. Grid Input Voltage 380V

Model	IPV-1K512U	IPV-3K24U
Efficiency		
MPP Tracking Efficiency	≥99.9%	
Max. Battery Mode Conversion Efficiency	≥93%	
PV Input		
Max. PV Input Power	650W	1500W
Max. PV Input Voltage	130V	145V
Start-Up Voltage	21V	36V
MPPT Voltage Range	15V-120V	30V-120V
Max. Input Current	20A	25A
MPP Trackers	1	
AC Input		
Max. Grid Input Voltage	380Vrms	
Nominal Voltage(Opitonal)	220VAC/230VAC/240VAC	
Input Voltage Range	90VAC-280VAC	
Max. AC Input Current	10A(Bypass Mode)	20A(Bypass Mode)
Nominal Operating Frequency	50/60Hz	
THDi	<3%	
AC Output		
Nominal AC Output Power	1500W	3000W
Max. Output Apparent Power	1800VA	3600VA
Nominal AC Output Voltage(Opitonal)	220VAC/230VAC/240VAC	
Total Voltage Harmonic Distortion	<3%	
Nominal AC Frenquency	50Hz	
Switch Time	20mS	
Surge Power	3000W@2S	6000W@2S
Overload Capacity	105%-150%@10S,150%-200%@2S	
Battery		
Battery Type	Lead-acid/Lithium-ion/User Defined	
Rated Voltage	12V	24V
Battery Voltage Range	10~15V	20-30V
Max. MPPT Charging Current	45A	60A
Max. Mains/Generator Charging Current	105A	120A
Max. Discharging Current	125A	125A
General		
Dimensions D*W*H(mm)	108*350*290	
Net Weight	5.5kg	6kg
Operating Temperature Range	-10°C~+55°C,>45°C,Power Derating	
Max. Operating Altitude	4000m, >2000m Power Derating	
Communication	RS232	RS485/RS232
Diesel Generator Support	No	
Smart Load Support	No	
Number of Parallel	No	
Cooling Method	Intelligent Fan Cooling	
Noise	<55dB(PV Connected),<45dB(No PV Connected)	
Authentication Level	IEC62109-1,IEC62109-2,IEC61683	
Protection		
Ingress Protection	IP54	
Overvoltage Protection	Yes	
Overload Protection	Yes	
Short Circuit Protection	Yes	
Over Temperature Protection	Yes	
Surge Protection	DC: TypeIII, AC: TypeIII	

Battery



IPW-25100
IPW-51100 | IPL-51100
IPL-51200 | IPL-51280
IPL-51314Y



24V-2.56kW

Product Features

Class-A LiFePO4 Battery

Cycle Life 6000+
High Safety and Performance

Intelligent BMS

50+ Protection Algorithms for Safety and Longer Lifespan
Number of Parallel: 15

High Compatibility

Self-Adaptive Communication with Mainstream Inverter

Model	IPW-25100
Battery Type	LiFePO4
Nominal Voltage	25.6V
Nominal Energy	2.56kWh
Nominal Capacity	100Ah
Operating Voltage Range	20V~28.8V
Standard Charging Current	50A
Maximum Continuous Charge Current	100A
Cut-Off Charging Voltage	28.8V
Cut-Off Charging Current	2A
Standard Discharge Current	50A
Maximum Continuous Discharge Current	100A
Maximum Pulse Discharge Current	150A
Cut-Off Discharge Voltage	20V
Cut-Off Discharge Current	2A
Dimensions	135mm*410mm*454mm
Weight	27kg
Communication Port	RS485/CAN/RS232
Parallel Number	15
Working Temperature/Charge	0℃~60℃
Working Temperature/Discharge	-20℃~60℃
Ingress Protection	IP21
Cooling Type	Natural Cooling
Humidity	10%-95%
Altitude (m)	2000m
Shell Material	Metal
Current Limiting Function	10A
Precharge Function	Enable
Display Mode	LED
Design Life	10 Years
Cycle Life	＞6000@25℃,0.5C,80%DOD
Authentication Level	IEC62619\UN38.3\MSDS\DGM



48V-5.12kWh

Product Features

Class-A LiFePO4 Battery

Cycle Life 6000+
High Safety and Performance

Intelligent BMS

50+ Protection Algorithms for Safety and Longer Lifespan
Number of Parallel: 15

High Compatibility

Self-adaptive Communication with Mainstream Inverter

Model	IPW-51100	IPL-51100
Battery Type	LiFePO4	
Nominal Voltage	51.2V	
Nominal Energy	5.12kWh	
Nominal Capacity	100Ah	
Operating Voltage Range	40V~58.4V	
Standard Charging Current	50A	
Maximum Continuous Charge Current	100A	
Cut-Off Charging Voltage	58.4V	
Cut-Off Charging Current	2A	
Standard Discharging Current	100A	
Maximum Continuous Discharge Current	100A	
Maximum Pulse Discharge Current	150A	
Cut-Off Discharge Voltage	40V	
Cut-Off Discharge Current	2A	
Dimensions D*W*H	135mm*585mm*454mm	450mm*510mm*153mm
Weight	45kg	50kg
Communication Port	RS485/CAN/RS232	
Parallel Number	15	
Working Temperature/Charge	0~55°C	
Working Temperature/Discharge	-20~60°C	
Ingress Protection	IP21	
Cooling Type	Natural Cooling	
Humidity	10%~95%	
Altitude (m)	2000m	
Shell Material	Metal	
Current Limiting Function	10A	
Precharge Function	Enable	
Display	LED	
Design Life	10 Years	
Cycle Life	>6000@25°C,0.5C,80%DOD	
Authentication Level	IEC62619\UN38.3\MSDS\DGM	



24V-5.12kWh

Product Features

Class-A LiFePO4 Battery

Cycle Life 6000+
High Safety and Performance

Solid Quality

Cells Contact System(CCS) Integrated Design and Manufacturing Technique

Intelligent BMS

50+ Protection Algorithms for Safety and Longer Lifespaan

Automatic Parallel Address

Number of Parallel: 32
No Dip Switch, Automatic Set to Parallel Address
Automatic Assign Master and Slave

High Compatibility

Self-adaptive Communicate with Mainstream Inverter
Max. Discharge Power up to 10kW@10S

Model	IPL-25200X
Battery Type	LifePO4
Nominal Voltage	25.6V
Nominal Energy	5.12kWh
Nominal Capacity	200Ah
Operating Voltage Range	21.6V~28.8V
Standard Charging Current	100A
Maximum Continuous Charge Current	200A
Cut Off Charging Voltage	28.8V
Cut Off Charging Current	1A
Standard Discharging Current	100A
Maximum Continuous Discharge Current	200A
Maximum Pulse Discharge Current	220A
Cut-Off Discharging Voltage	21.6V
Cut-Off Discharging Current	1A
Dimensions D*W*H	240mm*490mm*6mm
Weight	120kg
Communication Port	RS485/CAN/RS232
Parallel Number	32
Working Temperature/Charge	0°C~+55°C
Working Temperature/Discharge	-20°C~+60°C
Ingress Protection	IP21
Cooling Type	Natural Cooling
Humidity	10%-95%
Altitude	2000m
Shell Material	Metal
Current Limiting Function	20A
Precharge Function	Enable
Display	LED
Design Life	10 Years
Cycly life	>6000@25°C,0.5C,80%DOD
Authentication Level	IEC62619\UN38.3\MSDS\DGM



48V-10.24kWh/14.33kWh

Product Features

Class-A LiFePO4 Battery

Cycle Life 6000+
High Safety and Performance

Active Balance

3A Balance Current to Keep the Battery a Long Life

Intelligent BMS

50+ Protection Algorithms for Safety

High Compatibility

Self-Adaptive Communication with Mainstream Inverter

Model	IPL-51200	IPL-51280
Battery Type	LifePO4	
Nominal Voltage	51.2V	
Nominal Energy	10.24kWh	14.33kWh
Nominal Capacity	200Ah	280Ah
Operating Voltage Range	43.2V~57.6V	
Standard Charging Current	100A	140A
Maximum Continuous Charge Current	150A	150A
Cut Off Charging Voltage	57.6A	
Cut Off Charging Current	2A	
Standard Discharging Current	100A	140A
Maximum Continuous Discharge Current	150A	150A
Maximum Pulse Discharge Current	200A	280A
Cut-Off Discharging Voltage	43.2V	
Cut-Off Discharging Current	2A	
Balance Current	Active 3A	
	Positive 50mA	
Dimensions	880mm*560mm*175mm	880mm*560mm*230mm
Weight	95kg	125kg
Communication Port	RS485/CAN/RS232	
Parallel Number	15	
Working Temperature/Charge	0°C~60°C	
Working Temperature/Discharge	-20°C~60°C	
Ingress Protection	IP21	
Cooling Type	Natural Cooling	
Humidity	10%-95%	
Altitude	2000m	
Shell Material	Metal	
Current Limiting Function	20A	
Precharge Function	Enable	
Display	LED	
Design Life	10+Years	
Cycly life	＞6000@25℃,0.5C,80%DOD	
Authentication Level	IEC62619\UN38.3\MSDS\DGM	



48V-16kWh

Product Features

Class-A LiFePO4 Battery

Cycle Life 6000+
High Safety and Performance

Solid Quality

IP65 Ingress Protection
Cells Contact System(CCS) Integrated Design and Manufacturing Technique

Intelligent BMS

50+ Protection Algorithms for Safety and Longer Lifespaan

Automatic Parallel Address

Number of Parallel: 32
No Dip Switch, Automatic Set to Parallel Address
Automatic Assign Master and Slave

High Compatibility

Self-adaptive Communicate with Mainstream Inverter
Max. Discharge Power up to 16kW@10S

Model	IPL-51314Y
Battery Type	LifePO4
Nominal Voltage	51.2V
Nominal Energy	16kWh
Nominal Capacity	314Ah
Operating Voltage Range	43.2V~57.6V
Standard Charging Current	157A
Maximum Continuous Charge Current	195A
Cut Off Charging Voltage	57.6V
Cut Off Charging Current	1A
Standard Discharging Current	157A
Maximum Continuous Discharge Current	200A
Maximum Pulse Discharge Current	314A
Cut-Off Discharging Voltage	43.2V
Cut-Off Discharging Current	1A
Balance Current	Positive 150mA
Dimensions D*W*H	230mm*548mm*230mm
Weight	120kg
Communication Port	RS485/CAN/RS232
Parallel Number	32
Working Temperature/Charge	0°C~+55°C
Working Temperature/Discharge	-20°C~+60°C
Ingress Protection	IP65
Cooling Type	Natural Cooling
Humidity	10%-95%
Altitude	2000m
Shell Material	Metal
Current Limiting Function	20A
Precharge Function	Enable
Display	6 LED
Design Life	10 Years
Cycly life	>6000@25°C,0.5C,80%DOD
Authentication Level	IEC62619\UN38.3\MSDS\DGM

All-in-One



IESS-3K680N

IESS-05K10P





3600W+8000Wh ESS

Product Features

3 in 1 Household ESS

Intelligent EMS & Dual Output PCS & Intelligent BMS

Class-A LiFePO4 battery

Cycle Life 6000+, Up to 8-10 Years
LiFePO4 Battery, High Safety and Performance

Ultra-large Capacity

8000Wh LiFePO4 Battery
Back-up Time up to 2 Hours

Grid Compatibility

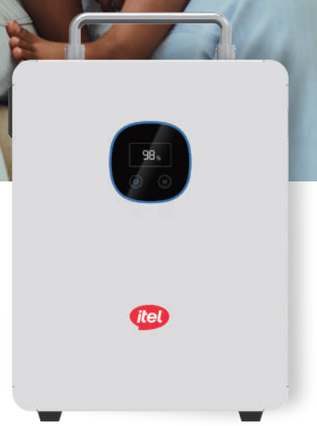
Phase Voltage Withstand Voltage 380V
Self-adapting to Unstable Power Grid THDv<3%
Self-adapting to Weak Grid

High Performance Inverter

UPS Class Switch time <10mS
Intelligent Overload Protection Mode

Model	IESS-3K680N
Efficiency	
MPPT Tracking Efficiency	99.0%
Max. Battery Mode Conversion Efficiency	90.0%
PV Input	
Max. PV Input Power	>5000W
Max. PV Input Voltage	500V
MPPT Voltage Range	40~430V
Start-Up Voltage	60V
Number of MPP Trackers	1
AC Input	
Max. Grid Input Voltage (Absolute Maximum Ratings)	380Vrms
Input Voltage Range	160-280VAC
OVP Voltage	280±10VAC
Maximum AC Input Power(Bypass mode+Battery charge)	4000W
Maximum AC Input Current(Bypass mode+Battery charge)	20A
Nominal Operating Frequency	50Hz/60Hz
AC Output	
Nominal AC Output Power (Inverter mode)	3600W
Max. Output Apparent Power (Inverter mode)	3600VA
Nominal AC Output Voltage(Inverter mode)	230VAC
Total Voltage Harmonic Distortion (Inverter mode)	<3%
Nominal AC Output Current (Inverter mode)	16.4A
Max. Output AC Output Current Limit(Inverter mode)	23A(3 seconds)
Nominal AC Frequency	50Hz
Switch Time	<10mS
Surge Power	5400VA (3 seconds)
Overload Capacity	105%~150%, after 3 seconds shutdown 150%~200%, after 0.2 second shutdown
Battery	
Battery Type	LiFePO4
Rated Battery Voltage	25.6VDC
Rated Capacity	314Ah
Battery Energy	8.038kWh
Cycle Life	6000
General Data	
Operating Temperature Range	-10~+60℃, >40℃ Power Derating
Max. Operating Altitude	4000m, >2000m Power Derating
Feed to Grid	Support
Cooling Method	Intelligent Fan Cooling
Noise	<47dB(1m)
Authentication Level	IEC62619/IEC62368/UN38.3
Protection	
Battery Fuse	Yes
Grid OVP	Yes
PV Over Voltage Protection	Yes
Overload Protection	Yes
Short Circuit Protection	Yes
Over Temperature Protection	Yes
Surge Protection	DC:Type II,AC:Type III





500W+1000Wh ESS

Product Features

3 in 1 Household ESS, Plug and Play

400W PV MPPT Controller
500W Hybrid Inverter
1000Wh Lithium Battery, Back up Time up to 2 Hours

Rapid Charge

PV and Grid Dual Charge, up to 500W
Battery Fully Charged in 2 hours

High Performance Inverter

Pure Sine Wave
UPS Class Switch Time <20mS

Class-A LiFePO4 battery

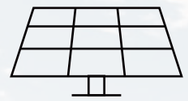
Cycle Life 6000+, Up to 10 Years
LiFePO4 Battery, High Safety and Performance

Grid Compatibility

Phase Voltage Withstand Voltage 380V
Self-adapting to Unstable Power Grid THDv<3%
Self-adapting to Weak Grid
Intellgient Power Control Algorithm, Self-adapting to Household Appliances

Model	IESS-05K10P
Efficiency	
MPPT Tracking Efficiency	99.0%
Max. Battery Mode Conversion Efficiency	88.0%
PV Input	
Max. PV Input Power	400W
Max. PV Input Voltage	60V
MPPT Voltage Range	11~60V
Start-Up Voltage	11V
Number of MPP Trackers	1
AC Input	
Max. Grid Input Voltage (Absolute Maximum Ratings)	380Vrms
Input Voltage Range	90-280VAC
OVP Voltage	280±10VAC
Maximum AC Input Power(Bypass mode+Battery charge)	1000W
Maximum AC Input Current(Bypass mode+Battery charge)	6A
Nominal Operating Frequency	50Hz/60Hz
AC Output	
Nominal AC Output Power (Inverter mode)	500W
Max. output apparent power (Inverter mode)	600VA
Nominal AC Output Voltage(Inverter mode)	230VAC
Total Voltage Harmonic Distortion (Inverter mode)	<3%
Nominal AC Output Current (Inverter mode)	2.2A
Max. Output AC Output Current Limit(Inverter mode)	3.0A
Nominal AC Frequency	50Hz
Switch Time	<20mS
Surge Power	600VA
Overload Capacity	CC 3.0A output @ >500W Latch output @ <165VAC
Battery	
Battery Type	LiFePO4
Rated Battery Voltage	3.2VDC
Rated Capacity	314Ah
Battery Energy	1000kWh
Cycle Life	6000
General Data	
Operating Temperature Range	-10~+60℃, >40℃ Power Derating
Max. Operating Altitude	4000m, >2000m Power Derating
SOC Display	LED
Cooling Method	Intelligent fan Cooling
Noise	<45dB(1m)
Authentication Level	IEC62619/IEC62368/UN38.3
Protection	
Battery Fuse	Yes
Grid OVP	Yes
PV Over Voltage Protection	Yes
Overload Protection	Yes
Short Circuit Protection	Yes
Over Temperature Protection	Yes
Surge Protection	AC:Type III

PV Modules

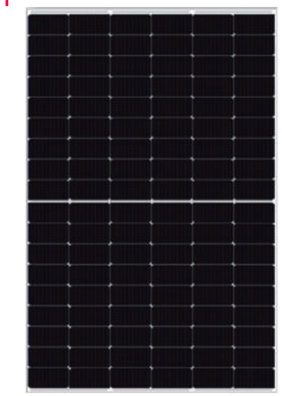


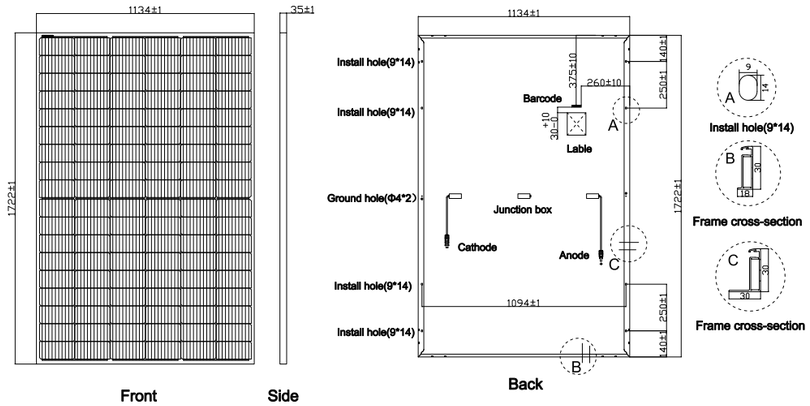
410W/P
550W/N

PV Modules-410W/P

▶ PV DRAWINGS

Unit:mm





410W **182*91mm**

Product Features

Half-cut Technology

New circuit design, lower internal current and lower internal resistance loss

Excellent Performance of PID Resistance

The performance of PID resistance(Potential Induced Degradation) passed the standard of TUV Nord

Lower Cost

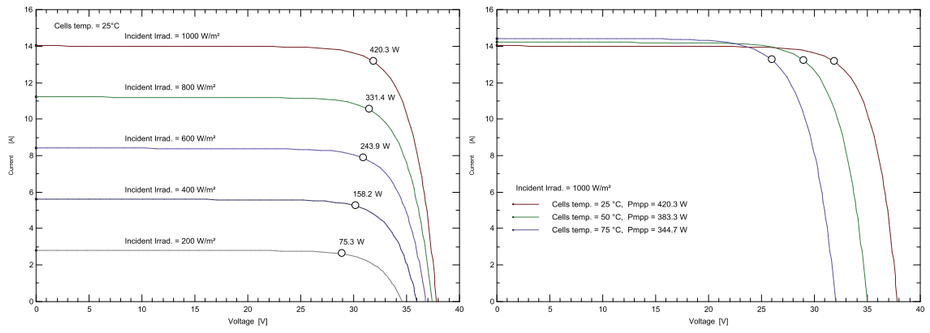
Increasing power generation can reduce the cost per kilowatt-hour

Significantly Avoiding Heat Spot

The unique circuit design to reduce the temperature of heat spot significantly, so that to reduce the power loss and then increase the output of modules

Model Type	ODA410-27V-MHP
ELECTRICAL DATA(STC) Irradiance at 1000 W/m2, Cell Temp 25°C,Air Mass AM1.5	
Rated Peak Power(Pmax)	410.00
Maximum Power Voltage(Vmp)	31.46
Maximum Power Current(Imp)	13.04
Open Circuit Voltage(Voc)	37.45±3%
Short Circuit Current(Isc)	13.85±3%
Module Efficiency(%)	20.97V
ELECTRICAL DATA(NMOT) Irradiance at 800 W/m2, Ambient Temp 20°C, Wind Speed 1 m/s.	
Peak Power(Pmax)	304.80
Maximum Power Voltage(Vmp)	29.20
Maximum Power Current(Imp)	10.44
Open Circuit Voltage(Voc)	35.05±3%
Short Circuit Current(Isc)	11.16±3%
OPERATING PARAMETERS	
Maximum System Voltage (V)	1500
Maximum Series Fuse Rating (A)	20
Operational Temp	-40~+85 °C
Nominal Module Operating Temp (NMOT)	45±2°C
TEMP COEFFICIENT	
Temp Coefficient Of Pmax	-0.350%/°C
Temp Coefficient Of Voc	-0.285%/°C
Temp Coefficient Of Isc	+0.045%/°C
PACKING STANDARD 40ft(HQ)	
Number Of Modules Per Pallet	37
Number Of Pallets Per Container	26
Number Of Modules Per Container	962
MECHANICAL CHARACTERISTICS	
Cell Type	182*91 Mono
No. of Cells	108(12*9)
Dimensions	1722*1134*30mm
Weight	21.50kg
Front Glass	3.2mm high transmission, tempered glass
Frame	Anodized Aluminum Profile (silver)
Junction box	IP68 rating, 1500V direct current (VDC), 3 diodes
Output cables	4.0 square millimeters, positive pole (+) 350 mm, negative pole (-) 350 mm (connectors included), or custom lengths.
MaxWind Load/Snow Load	2400Pa/5400Pa
Class Of Safety Protection	Class II
MaxWind Load/Snow Load	Class C
Connector	IP68

▶ IV CURVE (410W)

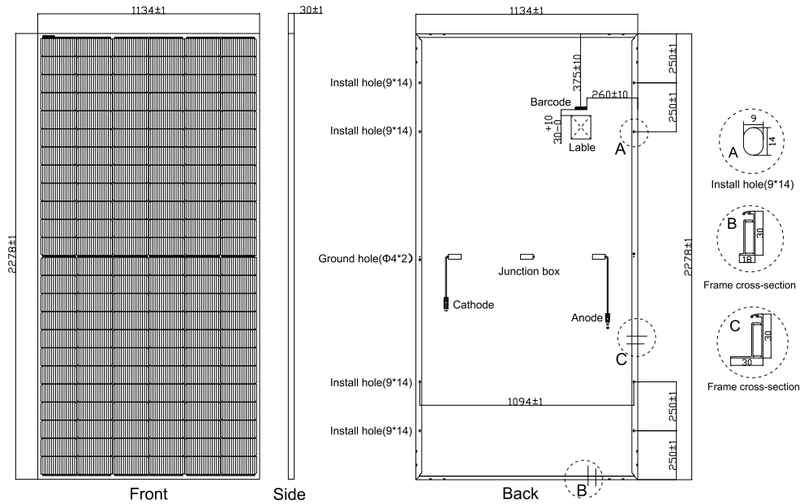


PV Modules-550W/N



▶ PV DRAWINGS

Unit:mm



550W **182*91mm**

Product Features

Low Temperature Impact

Superior Pmax temperature coefficient (-0.29%/°C) reducing power loss in high-heat conditions

Longer Low-Light Power

Generates electricity 1 hour longer at dawn/dusk maximizing daily energy yield

Reduced LID/LeTID Losses

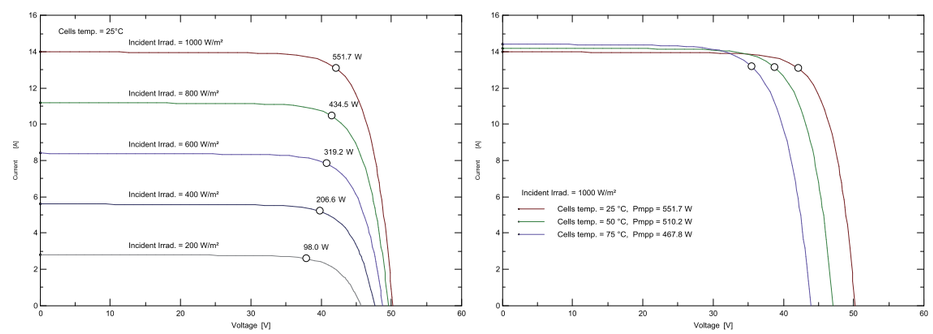
Advanced tech minimizes light/heat-induced degradation (LID/LeTID), ensuring stable output

Extreme Weather Resilience

Certified mechanical strength: 2400Pa wind load, 5400Pa snow load, guaranteeing durability

Model Type	ODA550-36V-MH
ELECTRICAL DATA(STC) Irradiance at 1000 W/m2, Cell Temp 25°C,Air Mass AM1.5	
Peak Power(Pmax)	550.00
Maximum Power Voltage(Vmp)	41.50
Maximum Power Current(Imp)	13.26
Open Circuit Voltage(Voc)	50.21±3%
Short Circuit Current(Isc)	14.00±3%
Module Efficiency(%)	21.29V
ELECTRICAL DATA(NMOT) Irradiance at 800 W/m2, Ambient Temp 20°C, Wind Speed 1 m/s.	
Peak Power(Pmax)	413.00
Maximum Power Voltage(Vmp)	38.99
Maximum Power Current(Imp)	10.61
Open Circuit Voltage(Voc)	47.70±3%
Short Circuit Current(Isc)	11.30±3%
OPERATING PARAMETERS	
Maximum System Voltage (V)	1500
Maximum Series Fuse Rating (A)	20
Operational Temp	-40~+85 °C
Nominal Module Operating Temp (NMOT)	45±2°C
TEMP COEFFICIENT	
Temp Coefficient Of Pmax	-0.300%/°C
Temp Coefficient Of Voc	-0.260%/°C
Temp Coefficient Of Isc	+0.047%/°C
PACKING STANDARD 40ft(HQ)	
Number Of Modules Per Pallet	37
Number Of Pallets Per Container	20
Number Of Modules Per Container	740
MECHANICAL CHARACTERISTICS	
Cell Type	182*91 N-Type Mono
No. of Cells	144(12*12)
Dimensions	2278*1134*30mm
Weight	27.40kg
Front Glass	3.2mm AR Coating, Tempered Glass
Frame	Anodized Aluminum Profile (silver)
Junction box	IP68,1500VDC, 3 Schottky Bypass Diodes
Output cables	4.0 square millimeters, positive pole (+) 350 mm, negative pole (-) 350 mm (connectors included), or custom lengths.
MaxWind Load/Snow Load	2400Pa/5400Pa
Class Of Safety Protection	Class II
MaxWind Load/Snow Load	Class C
Connector	IP68

▶ IV CURVE (550W)



CASE STUDY
PRESENTATION







Application
Hospital

PV Capacity
52.8kW

PV Modules
110 x 480W

Energy Solution
IP54 6kW x10 Hybrid Solar Inverter

Installation Days
3 Days



Application
Bank

Energy Solution
6kW x 2Hybrid Inverter

PV Capacity
12kW

Battery Information
5 x 5kWh

Installation Days
1 Day











Application

Education

Battery Information

2 x 5kWh

Energy Solution

IP54 6kW x 1 Hybrid Inverter

PV Capacity

5kW

Installation Days

1 Day







Application

itel Home Shop

Battery Information

22 x 5.12kWh

Energy Solution

IP66 12kW x 5 Hybrid Inverter

PV Capacity

49.5kW

Installation Days

2 Day