InfiniSolar V IV

- Customizable status LED ring with RGB lights
- Touchable button with 4.3" colored LCD
- Supports USB On-the-Go function
- Data log events stored in the inverter
- Self-consumption and Feed-in to the grid
- Programmable supply priority for PV, Battery or Grid
- User-adjustable charging current and voltage
- Programmable multiple operation modes: Grid-tie, off-grid and grid-tie with backup
- Built-in Wi-Fi for mobile monitoring (App is available)
- Reserved communication port for BMS
- Parallel operation up to 9 units

InfiniSolar V IV On-Grid Inverter with Energy Storage Selection Guide

MODEL	InfiniSolar V IV 3.6KW	InfiniSolar V IV 5.6KW	InfiniSolar V IV 6KW
PHASE	1-phase in / 1-phase out		
MAXIMUM PV INPUT POWER	5000W	6000W	6500W
RATED OUTPUT POWER	3600W	5600W	6000W
MAXIMUM CHARGING POWER	5000W	6000W	6000W
GRID-TIE OPERATION			
PV INPUT (DC)			
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC	360 VDC / 450 VDC	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	110VDC / 120 VDC	110VDC / 120 VDC	120VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC
Number of MPP Trackers / Maximum Input Current	1 / 18 A	1 / 27 A	1 / 27A
GRID OUTPUT (AC)			
Nominal Output Voltage	220/230/240 VAC		
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)		
Nominal Output Current	15.6A	24.3A	26.1A
Power Factor	> 0.9		
EFFICIENCY			
Maximum Conversion Efficiency (DC/AC)	96%	96%	95%
OFF-GRID OPERATION			
AC INPUT			
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC		
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC		
Maximum AC Input Current	40 A	40 A	40 A
PV INPUT (DC)			
Maximum DC Voltage	500 VDC	450 VDC	500 VDC
MPP Voltage Range	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC
Number of MPP Trackers / Maximum Input Current	1 / 18 A	1 / 27 A	1 / 27 A
BATTERY MODE OUTPUT (AC)			
Nominal Output Voltage	220/230/240 VAC		
Output Waveform	Pure sinewave		
Efficiency (DC to AC)	93%	93%	93%
HYBRID OPERATION			
PV INPUT (DC)			
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC	360 VDC / 450 VDC	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	110VDC / 120 VDC	110VDC / 120 VDC	120VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC
Number of MPP Trackers / Maximum Input Current	1 / 18 A	1 / 27 A	1 / 27A
GRID OUTPUT (AC)			
Nominal Output Voltage	220/230/240 VAC		
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)		
Nominal Output Current	15.6A	24.3A	26.1A
AC INPUT			
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC		
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC		
Maximum AC Input Current	40A	40A	40A
BATTERY MODE OUTPUT (AC)			
Nominal Output Voltage	220/230/240 VAC		
Efficiency (DC to AC)	93%	93%	93%
BATTERY & CHARGER			
Nominal DC Voltage	48 VDC	48 VDC	48 VDC
Maximum Solar Charging Current	100A	120A	120A
Maximum AC Charging Current	100A	120A	120A
Maximum Charging Current	100A	120A	120A
GENERAL			
PHYSICAL			
Dimension, D x W x H (mm)	140 x 295 x 468		
Net Weight (kgs)	11	12	12
INTERFACE			
Parallel Function	Yes, 9 units		
Communication Port	USB/RS232/RS485/Wifi/Dry-contact		
ENVIRONMENT			
Humidity	0 ~ 90% RH (Non-condensing)		
Operating Temperature	-10 to 50℃		

Product specifications are subject to change without further notice.

LIO II-4810 is Lithium-ion battery module specially designed for energy storage system with 48V system

- Lithium Iron Phosphate (LFP) cell guarantees safety and reliability
- Easy to install on the floor
- Suitable for wide range of inverters with 48V system

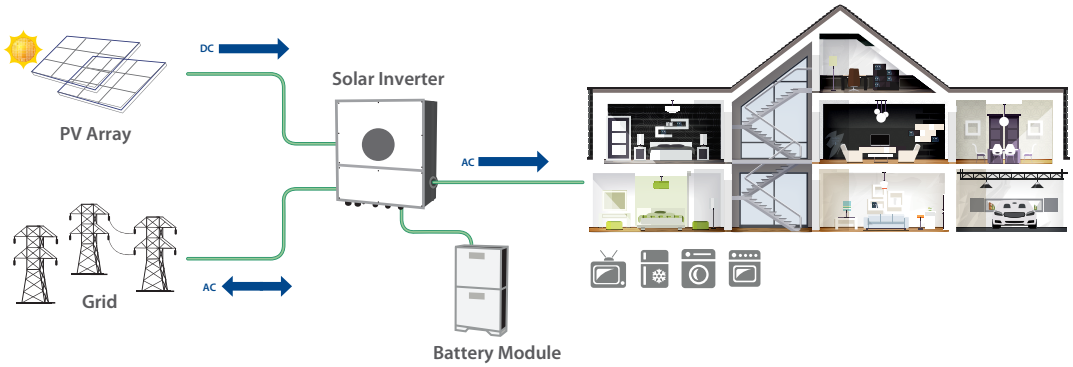
Compact size and Lightweight
Built-in Lithium Iron Phosphate (LFP) cell with less space and weight.

Fast charging
Battery module can be fully charged in shorter time.

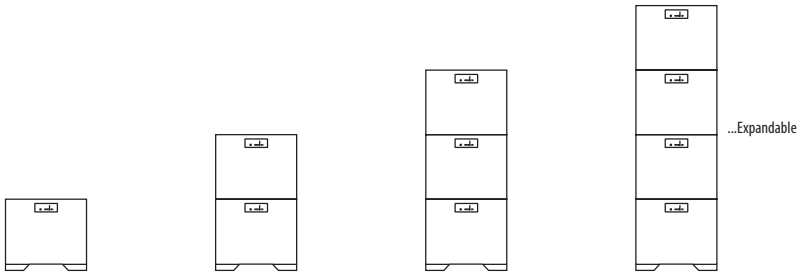
Modular design for easy scalable
Battery module can be easily stacked and added for energy expansion.

Maximum Lifecycle
8000 cycles is for 60% DOD with >50% capacity
2000 cycles is for 90% DOD with >80% capacity

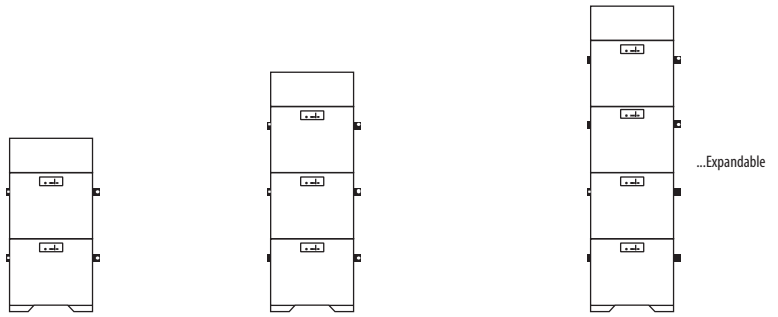
System Diagram



Technical Selection Guide



Battery Module	LIO II-4810 (5 kWh, 51.2V)			
Battery Cell Technology	Lithium Iron Phosphate			
Applicable Inverter Rating	≦ 5.6 kW			
Number of Module	1	2	3	4
Usable Energy	5 kWh	10 kWh	15 kWh	20 kWh
Rated Discharging Current	150 A	150 A	150 A	150 A
Peak Discharging Current	192 A, 1 min	192 A, 1 min	192 A, 1 min	192 A, 1 min
Nominal Voltage	51.2 V	51.2 V	51.2 V	51.2 V
Operating Voltage	40 -56 VDC	40 -56 VDC	40 -56 VDC	40 -56 VDC
Charging Current	100A Max, 30A Default	100A Max, 30A Default	100A Max, 30A Default	100A Max, 30A Default
Dimension, D x W x H (mm) without feet	185 x 540 x 420	185 x 540 x 840	185 x 540 x 1260	185 x 540 x 1680
Net Weight (kg)	48	96	144	192



Battery Module	LIO II-4810 (5 kWh, 51.2V)		
Battery Cell Technology	Lithium Iron Phosphate		
Applicable Inverter Rating	6 kW ~ 12 kW		
Number of Module	2	3	4
Number of PDU Module	1	1	1
Usable Energy	10 kWh	15 kWh	20 kWh
Rated Discharging Current	300 A	300 A	300 A
Peak Discharging Current	384 A, 1 min	384 A, 1 min	384 A, 1 min
Nominal Voltage	51.2 V	51.2 V	51.2 V
Operating Voltage	40 - 56 VDC	40 - 56 VDC	40 - 56 VDC
Dimension, D x W x H (mm) without feet	185 x 540 x 1040	185 x 540 x 1460	185 x 540 x 1880
Net Weight (kg)	102	150	198

General Specification

Operation Temperaturet	Charge	0°C~50 °C
	Discharge	0°C~50 °C
Storage Temperature (At 50% SOC and specified temp, recoverable capacity in % vs time / 50%)		< 18 months: -20°C~25 °C
		< 3 months: 25°C~45 °C
		< 1 months: 45°C~60 °C
		20°C ± 5 °C is the recommended storage temperature
IP Protection		IP20
Communication		RS485 port (RJ45), CAN
Certifications		UN38.3, IEC 62619

Product specifications are subject to change without further notice.

Vertex S

BACKSHEET MONOCRYSTALLINE MODULE

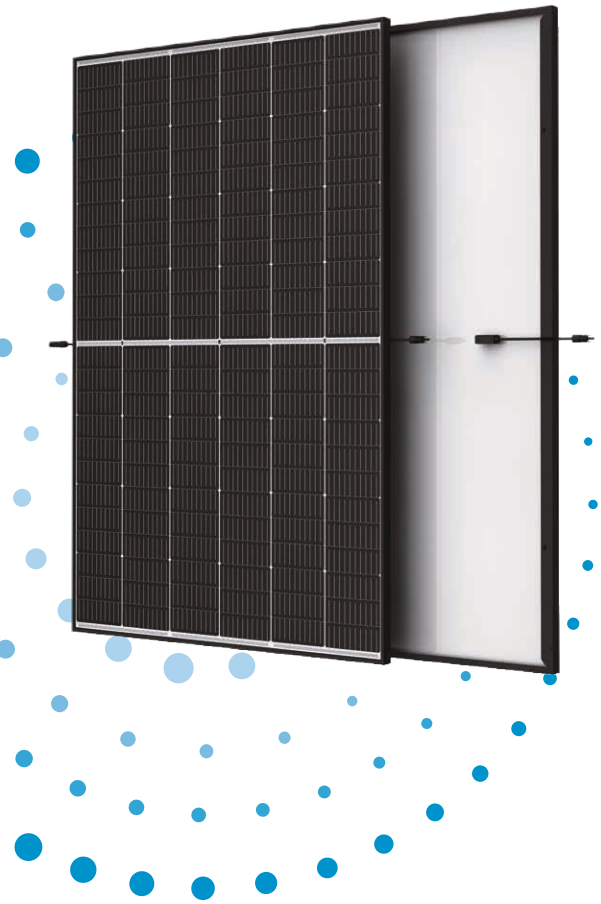
PRODUCT: TSM-DE09R.08

POWER RANGE: 415-435 W

435 W+
MAXIMUM POWER OUTPUT

0/+5 W
POSITIVE POWER TOLERANCE

21.8 %
MAXIMUM EFFICIENCY



Small in size, big on power

- Generates up to 435 W, 21.8 % module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping, lower series resistance, improved current collection and enhanced reliability
- Excellent low light performance (IAM) with cell process and module material optimization

Universal solution for residential and C&I rooftops

- Designed for compatibility with existing mainstream inverters, optimizers and mounting systems
- Perfect size and low weight for easy handling. Optimized transportation cost
- Reduces installation cost with higher power bin and efficiency
- Flexible installation solutions for system deployment

High Reliability

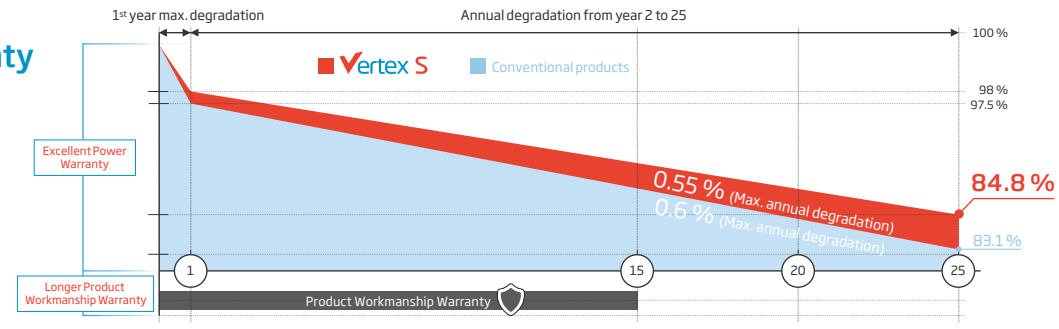
- Positive load up to 6,000 Pa (snow)
- Negative load up to 4,000 Pa (wind)

Extended Vertex S Warranty

2 %
1st year max. degradation

0.55 %
Max. annual degradation from year 2 to 25

15 Years
Product Workmanship Warranty



Comprehensive Product and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gases Emissions Verification
ISO45001: Occupational Health and Safety Management System

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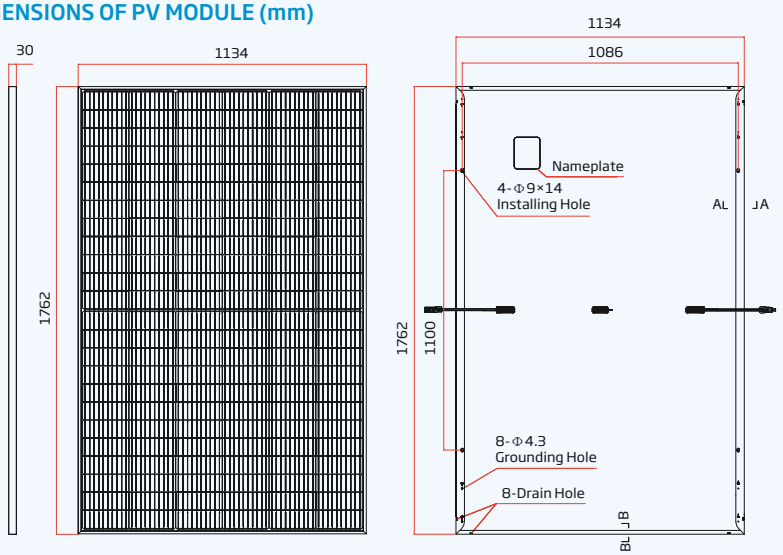
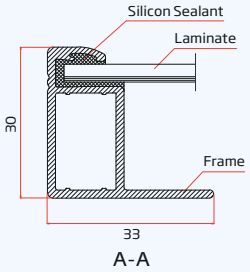
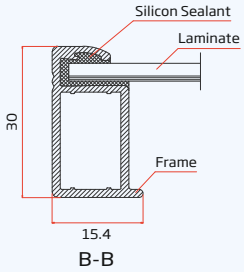
Vertex S

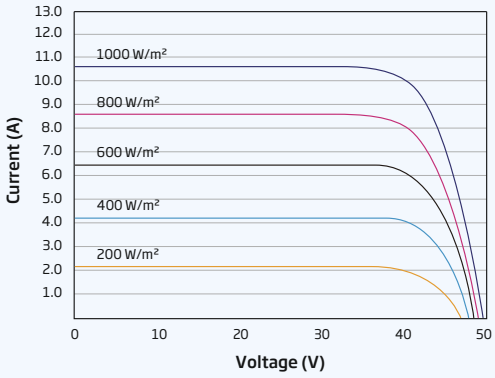
DIMENSIONS OF PV MODULE (mm)



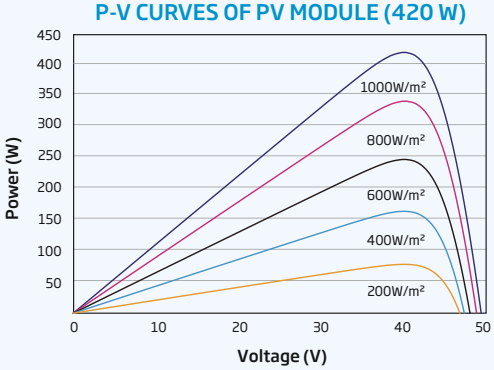




I-V CURVES OF PV MODULE (420 W)



P-V CURVES OF PV MODULE (420 W)



ELECTRICAL DATA (STC)

	TSM-415 DE09R.08	TSM-420 DE09R.08	TSM-425 DE09R.08	TSM-430 DE09R.08	TSM-435 DE09R.08
Peak Power Watts-PMAX (Wp)*	415	420	425	430	435
Power Tolerance-PMAX (W)	0/+5	0/+5	0/+5	0/+5	0/+5
Maximum Power Voltage-VMPP (V)	41.0	41.3	41.5	41.8	42.0
Maximum Power Current-IMPP (A)	10.11	10.17	10.24	10.30	10.36
Open Circuit Voltage-VOC (V)	49.4	49.7	49.9	50.3	50.6
Short Circuit Current-ISC (A)	10.64	10.69	10.74	10.81	10.86
Module Efficiency η m (%)	20.8	21.0	21.3	21.5	21.8

STC: Irradiance 1000 W/m², Cell Temperature 25 °C, Air Mass AM1.5 *Measuring tolerance: ±3%

ELECTRICAL DATA (NOCT)

	TSM-415 DE09R.08	TSM-420 DE09R.08	TSM-425 DE09R.08	TSM-430 DE09R.08	TSM-435 DE09R.08
Maximum Power-PMAX (Wp)	313	317	321	325	329
Maximum Power Voltage-VMPP (V)	38.5	38.8	39.1	39.4	39.6
Maximum Power Current-IMPP (A)	8.13	8.17	8.21	8.26	8.30
Open Circuit Voltage-VOC (V)	46.5	46.7	46.9	47.3	47.6
Short Circuit Current-ISC (A)	8.58	8.62	8.66	8.71	8.75

NOCT: Irradiance at 800 W/m², Ambient Temperature 20 °C, Wind Speed 1 m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	144 cells
Module Dimensions	1762×1134×30 mm
Weight	21.8 kg
Glass	3.2 mm, High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA/POE
Backsheet	White
Frame	30 mm Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0 mm² Landscape: 1100/1100 mm Portrait: 280/350 mm*
Connector	TS4/MC4 EVO2*

*Special order only

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43 °C (±2 K)
Temperature Coefficient of PMAX	-0.34 %/K
Temperature Coefficient of VOC	-0.25 %/K
Temperature Coefficient of ISC	0.04 %/K

MAXIMUM RATINGS

Operational Temperature	-40 to +85 °C
Maximum System Voltage	1500 V DC (IEC)
Max Series Fuse Rating	20 A

WARRANTY

15 Year product workmanship warranty

25 Year power warranty

2 % First year degradation

0.55 % Annual power degradation

(Please refer to the applicable limited warranty for details)

PACKAGING CONFIGURATION

Modules per box	36 pieces
Modules per 40' container	936 pieces

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CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

Version number: TSM_EN_2022_PA1

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