

FEATURES

- Graphene supercapacitor cells
- Safest technology
- Ultra-long cycle life
- Extreme temperature
- Highest energy transfer efficiency
- Easy to install
- Rarely maintenance
- 10 years warranty



Part Number	24878K
Energy storage	5.5 kWh
Nominal Voltage	48V/DC
Maximum Charge Voltage	58V/DC
Discharge Cut-off Voltage	37.8V/DC
ESR/AC @1KHz 50% SOC	<10mΩ
Max. Continuous Charge Current	100A
Max. Continuous Discharge Current	100A
Power/Energy	0.926
Round Trip Efficiency*1	95%
Cells Self-discharge Rate	2% per month
Projected Cycle Life (25°C)	20,000 times
Recommended Depth of Discharge	≤90%
Maximum Depth of Discharge	100%
Cooling Method	Natural
Shell Material	Metal & ABS plastic
Parallel Connection	Up to 10sets
Monitoring Data	System voltage, current, temperature, SOC, SOH, cycle, cell's voltage

Remark: *1 (1) At room temperature 25 °C, charge-discharge at 100A. (2) Limited charge at 100A for resident energy storage, (3) At the beginning of life.

COMPLIANCE INFORMATION

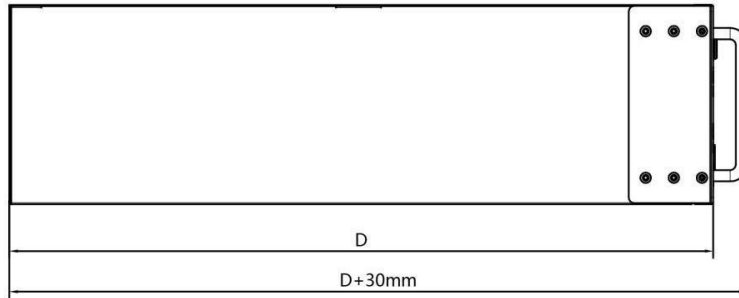
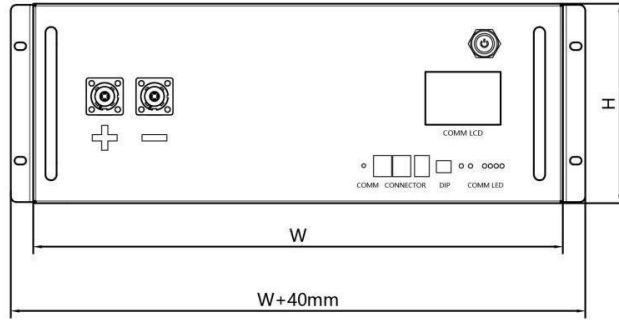
Safety	IEC62619
Transport	UN38.3, MSDS
CE	EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017, EN 61000-3-2:2014, EN 61000-3-3:2013
Environmental	RoHS

ENVIRONMENTAL SPECIFICATIONS

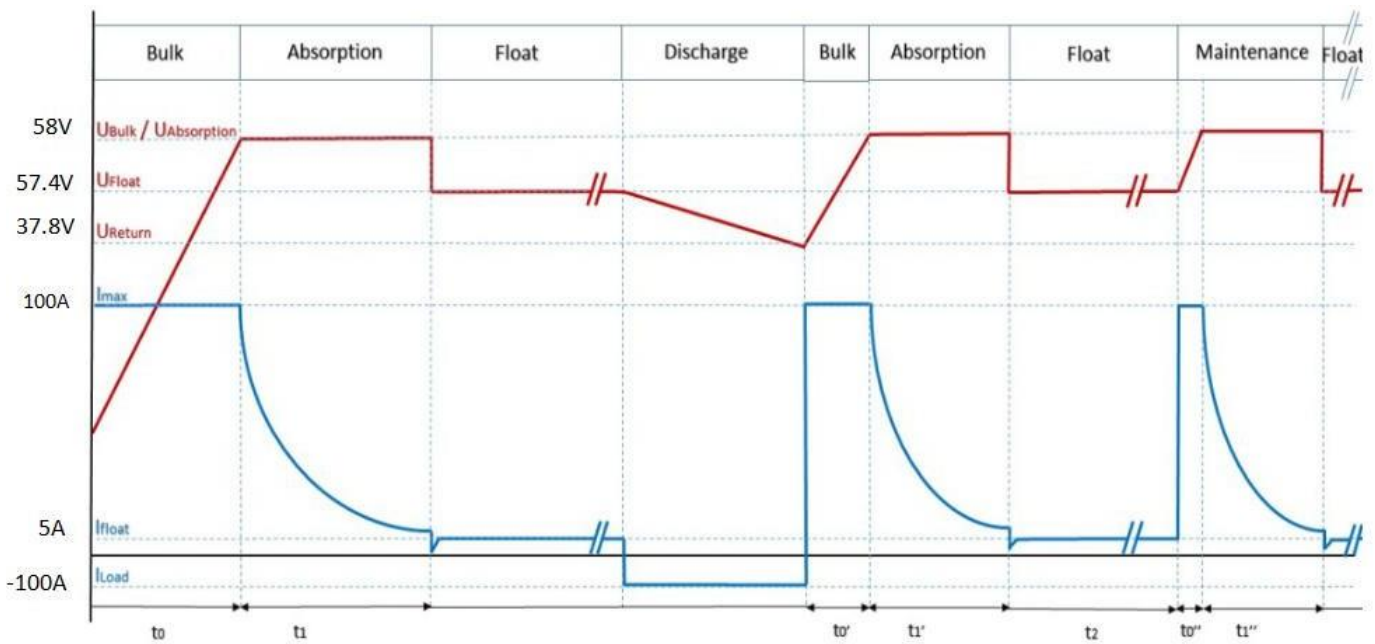
Environmental Protection	IP20
Operating Humidity	0~90% RH Non-condensing
Charge Temperature	0°C ~ +55°C
Discharge Temperature	-20°C ~ +60°C
Storage Conditions	-20°C ~ +40°C, 25% ~ 95% RH SOC>30% one full charge needed per two months

SUPER CAPACITOR ENERGY STORAGE MODULE

MECHANICAL SPECIFICATIONS	
Part Number	24878K
Weight	58Kg
Dimensions (W x D x H)	475 x 665 x 177(mm)
Mount Options	On floor



CHARGING-DISCHARGING CURVE



Note: If the charger needs to set the floating charge voltage, it is recommended to set the U_{Float} value to 57.4V.

Axpert VM IV Off-Grid Inverter



- Customizable status LED ring with RGB lights
- Touchable button with 4.3" colored LCD
- Built-in Wifi for mobile monitoring (App is available)
- Supports USB On-the-Go function
- Data log events stored in the inverter
- Reserved communication port (RS485, CAN-BUS or RS232) for BMS
- Battery independent design
- Battery equalization extends lifecycle
- User-friendly LCD operation
- Enhanced charging power
- Built-in anti-dust kit

OFF-GRID INVERTER

User-programmable RGB lighting for different operation mode

Three lighting effects



- Cycling**
Quickly scrolling with a color of your choice in a continuous circular motion
- Wheel**
Illuminates with twinkling lights in a color of your choice
- Chasing**
Radiates your selected color upward from the bottom of the ring

Axpert VM IV Off-Grid Inverter Selection Guide

MODEL	Axpert VM IV 3600-24	Axpert VM IV 5600-48
Rated Power	3600VA/3600W	5600VA/5600W
INPUT		
Voltage	230 VAC	
Selectable Voltage Range	170-280 VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
OUTPUT		
AC Voltage Regulation (Batt. Mode)	230 VAC ± 5%	
Surge Power	7200VA	11200VA
Efficiency (Peak)	90% ~ 93%	
Transfer Time	15 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
BATTERY		
Battery Voltage	24 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	33 VDC	63 VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger Type	MPPT	MPPT
Maximum PV Array Power	4000 W	6000 W
MPPT Range @ Operating Voltage	120 ~ 450 VDC	
Maximum PV Array Open Circuit Voltage	500 VDC	
Maximum Solar Charge Current	120 A	120 A
Maximum AC Charge Current	100 A	100 A
Maximum Charge Current	120 A	120 A
PHYSICAL		
Dimension, D x W x H (mm)	115 x 300 x 400	
Net Weight (kgs)	9.0	10.0
Communication Interface	USB/RS232/RS485/WiFi/Dry-contact	
OPERATING ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	-10°C to 50°C	
Storage Temperature	-15°C to 60°C	

Product specifications are subject to change without further notice.

Vertex S

BACKSHEET MONOCRYSTALLINE MODULE

PRODUCT: TSM-DE09.08
 PRODUCT RANGE: 390-405W

405W+

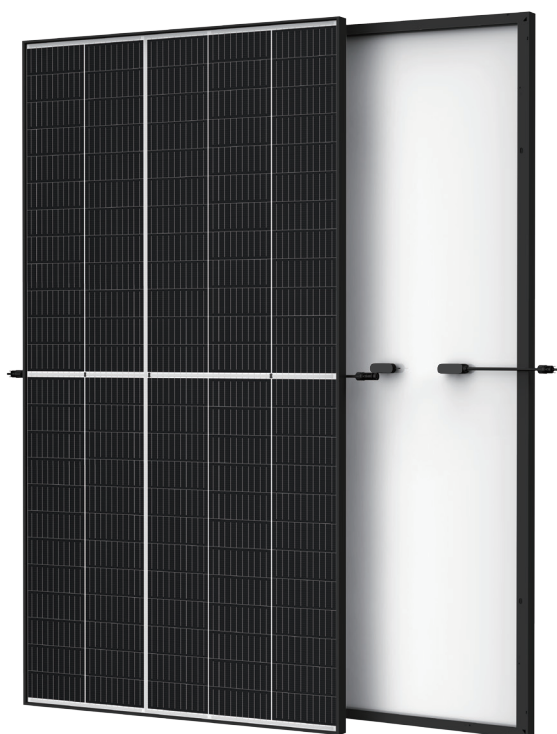
MAXIMUM POWER OUTPUT

0~+5W

POSITIVE POWER TOLERANCE

21.1%

MAXIMUM EFFICIENCY



Small in size, big on power

- Small form factor. Generate a huge amount of energy even in limited space. Up to 405W, 21.1% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection
- Reduce installation cost with higher power bin and efficiency
- Boost performance in warm weather with lower temperature coefficient (-0.34%) and operating temperature



Universal solution for residential and C&I rooftops

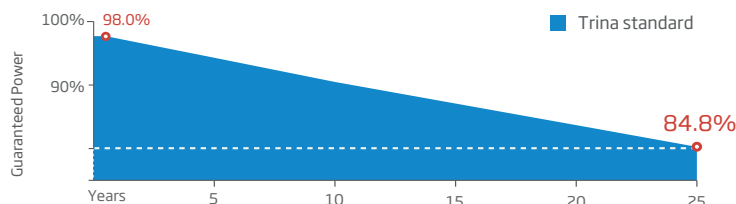
- Designed for compatibility with existing mainstream optimizers, inverters and mounting systems
- Perfect size and low weight. Easy for handling. Economy for transporting
- Diverse installation solutions. Flexible for system deployment



High Reliability

- 15 year product warranty
- 25 year performance warranty with lowest degradation;
- Ensured PID resistance through cell process and module material control
- Mechanical performance up to 6000 Pa positive load and 4000 Pa negative load

Trina Solar's Backsheet Performance Warranty



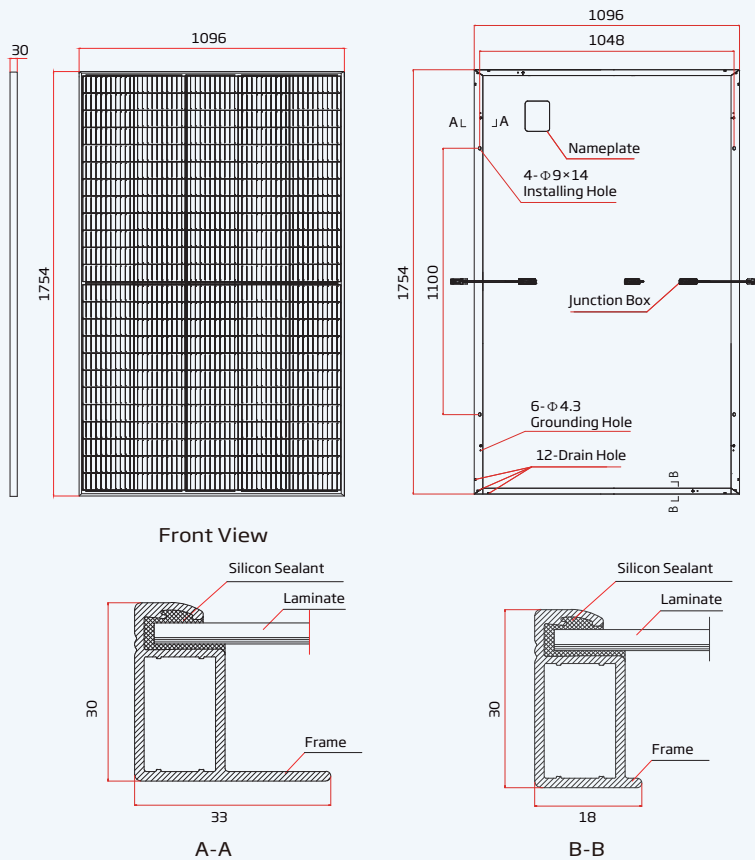
Comprehensive Products and System Certificates



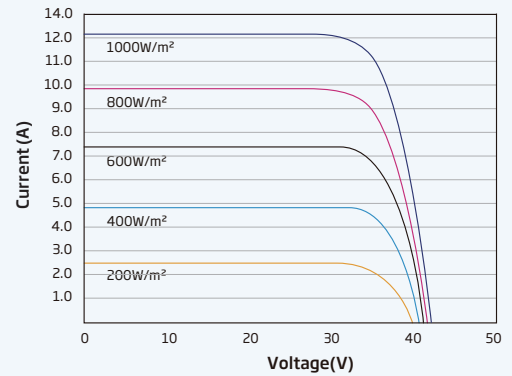
IEC61215/IEC61730/IEC61701/IEC62716
 ISO 9001: Quality Management System
 ISO 14001: Environmental Management System
 ISO14064: Greenhouse Gases Emissions Verification
 ISO45001: Occupational Health and Safety Management System



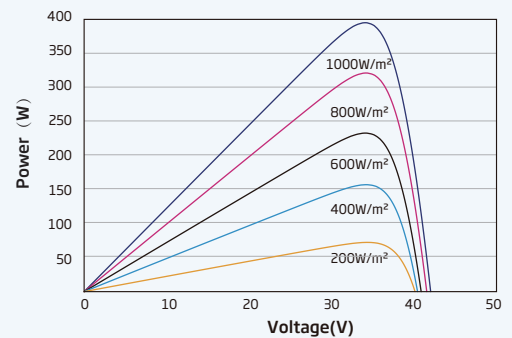
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(395 W)



P-V CURVES OF PV MODULE(395W)



ELECTRICAL DATA (STC)

Parameter	390	395	400	405
Peak Power Watts-P _{MAX} (Wp)*	390	395	400	405
Power Tolerance-P _{MAX} (W)	0 ~ +5			
Maximum Power Voltage-V _{MPP} (V)	33.8	34.0	34.2	34.4
Maximum Power Current-I _{MPP} (A)	11.54	11.62	11.70	11.77
Open Circuit Voltage-V _{OC} (V)	40.8	41.0	41.2	41.4
Short Circuit Current-I _{SC} (A)	12.14	12.21	12.28	12.34
Module Efficiency η _m (%)	20.3	20.5	20.8	21.1

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

ELECTRICAL DATA (NOCT)

Parameter	295	298	302	306
Maximum Power-P _{MAX} (Wp)	295	298	302	306
Maximum Power Voltage-V _{MPP} (V)	31.8	32.0	32.2	32.5
Maximum Power Current-I _{MPP} (A)	9.26	9.32	9.38	9.41
Open Circuit Voltage-V _{OC} (V)	38.4	38.6	38.8	38.9
Short Circuit Current-I _{SC} (A)	9.78	9.84	9.90	9.95

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

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	120 cells
Module Dimensions	1754×1096×30 mm (69.06×43.15×1.18 inches)
Weight	21.0 kg (46.3 lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA/POE
Backsheet	White
Frame	30mm(1.18 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²), Portrait: 280/280 mm(11.02/11.02 inches) Landscape: 1100/1100 mm(43.31/43.31 inches)
Connector	MC4 EVO2 / TS4*

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of P _{MAX}	-0.34%/°C
Temperature Coefficient of V _{OC}	-0.25%/°C
Temperature Coefficient of I _{SC}	0.04%/°C

MAXIMUM RATINGS

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

WARRANTY

15 year Product Workmanship Warranty
25 year Power Warranty
2% first year degradation
0.55% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

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