

aerVolt

AI-DRIVEN SMART SOLAR PANELS



A E R V O L T

aerpace Industries Limited

A 1005, Kanakia Wall Street, Andheri Kurla Road, Andheri East, Mumbai, Maharashtra, India 400093
info@aerpace.com | www.aerpace.com

INTRODUCING

BREAKTHROUGH TECHNOLOGIES AND GAME-CHANGING INNOVATIONS

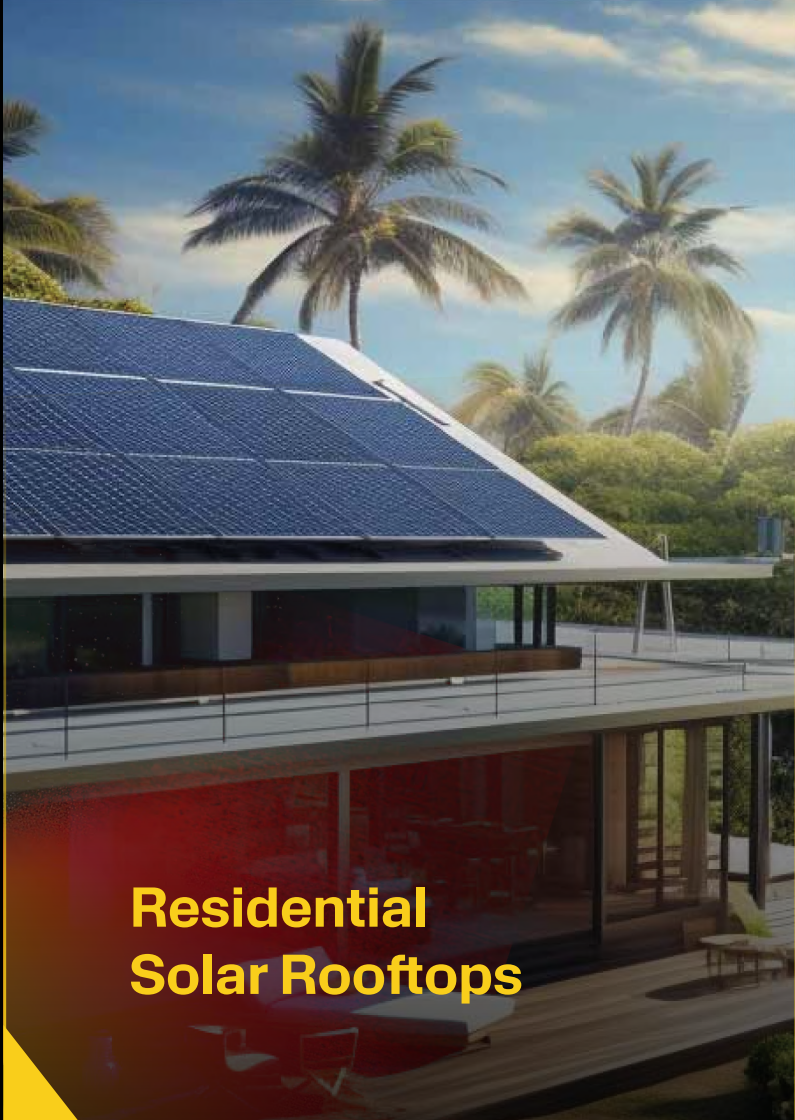
aerVolt, a division of aerospace Industries Limited, is revolutionizing the solar industry with AI-driven smart solar panels designed for high efficiency, durability, and real-time optimization. Our panels incorporate Monocrystalline Silicon PERC and TOPCon technology, ensuring maximum energy yield, long-term reliability, and seamless grid integration.

Our state-of-the-art manufacturing facility in Pune, India, has an annual production capacity of 400 MW and adheres to international quality and safety standards.



ANNUAL PRODUCTION CAPACITY OF **400 MW**

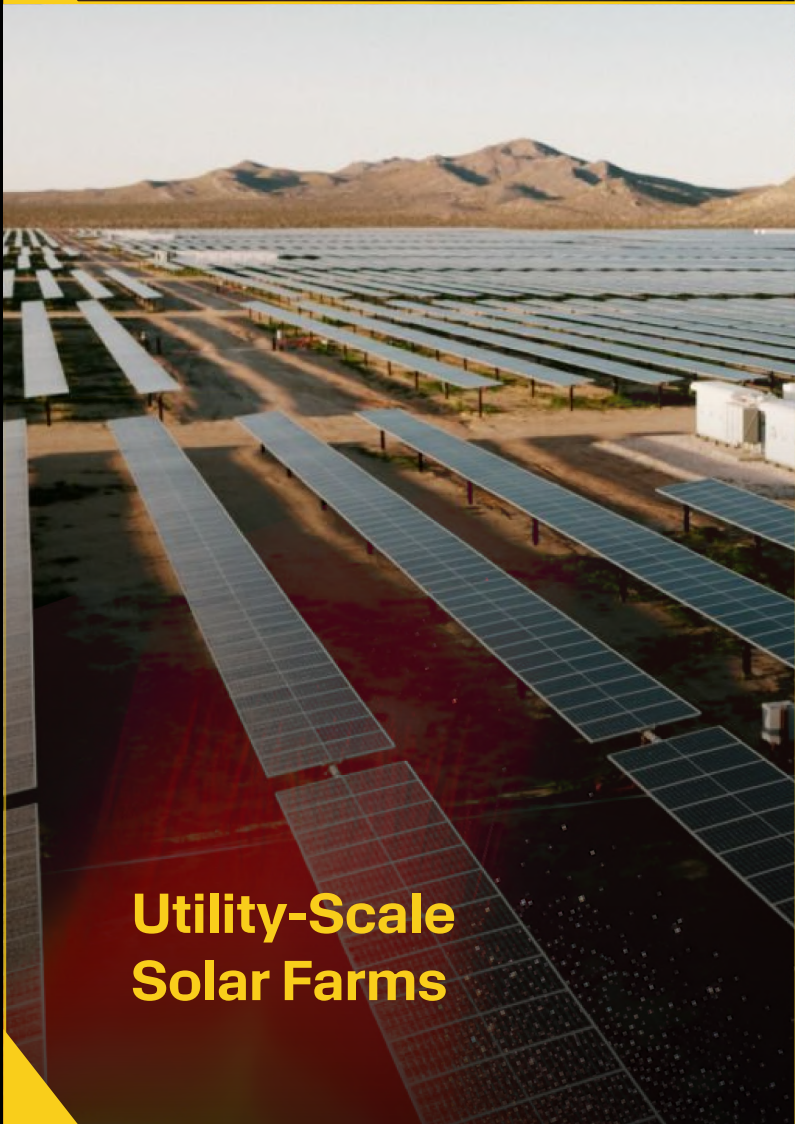
AI DRIVEN - SMART SOLAR PANELS



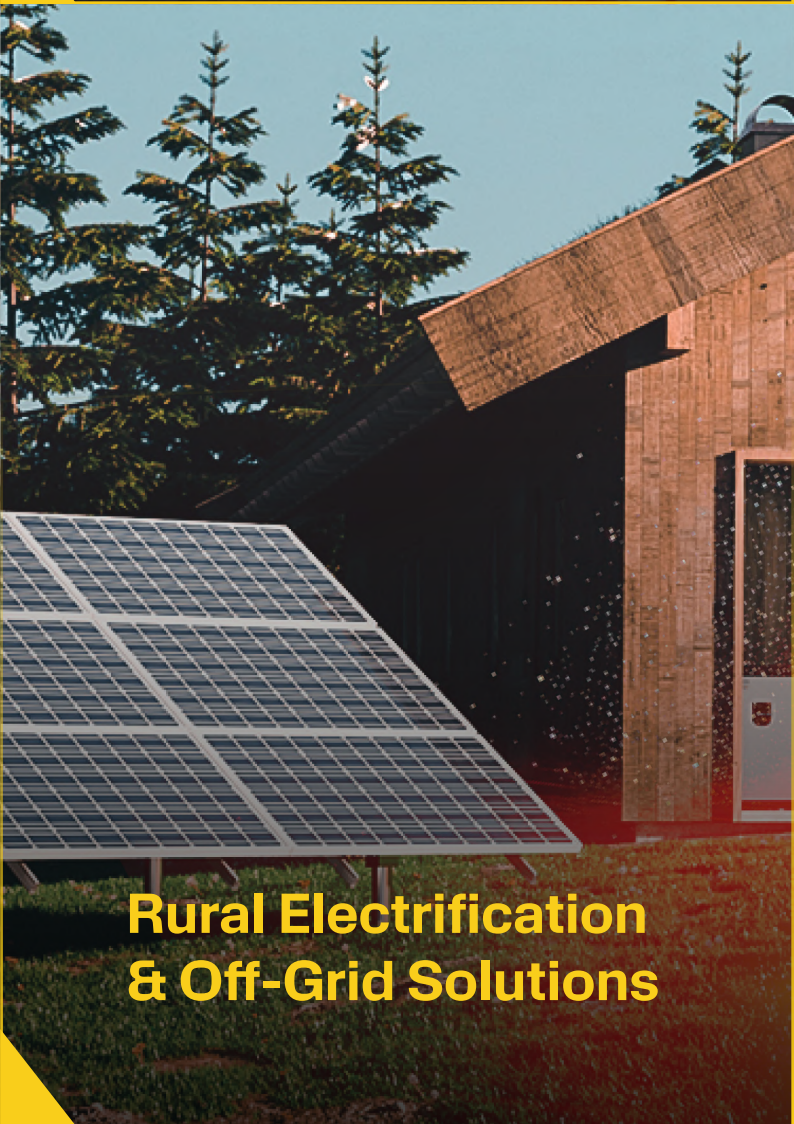
**Residential
Solar Rooftops**



**Commercial
& Industrial**



**Utility-Scale
Solar Farms**



**Rural Electrification
& Off-Grid Solutions**

REVOLUTIONARY SOLAR MODULES

Nova

TOPCON TECHNOLOGY

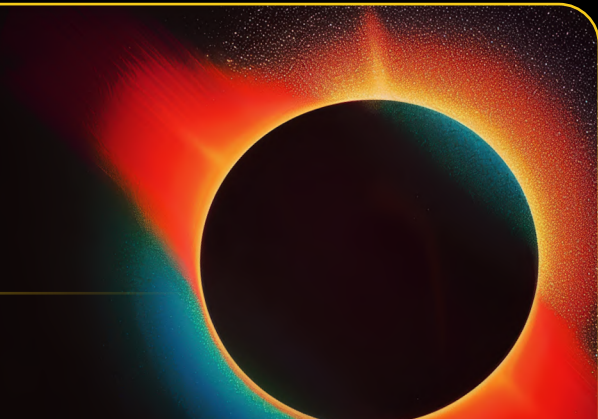
The most advanced N-Type TOPCon technology for higher power output and low degradation.



Nex

BIFACIAL MODULE

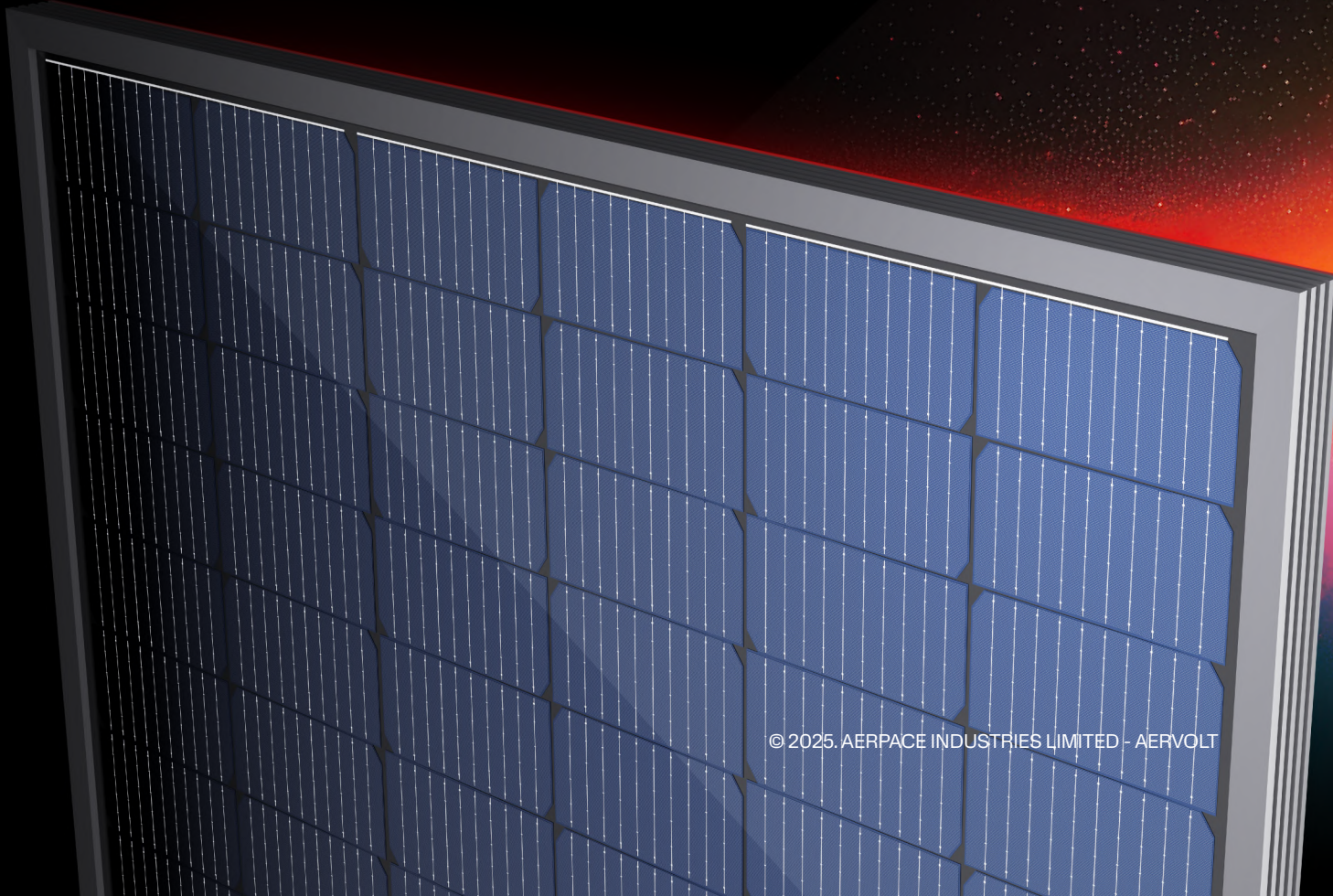
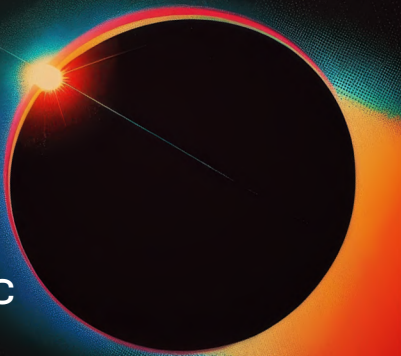
Designed for maximum energy yield, these panels generate power from both sides, making them ideal for solar farms and reflective surfaces.



Nimbus

MONOCRYSTALLINE PERC

High-efficiency Monocrystalline silicon panels optimized for rooftop, commercial, and utility-scale projects.



AI-DRIVEN SMART FEATURES



Real-Time Optimization

AI monitors sunlight, shading, and temperature, dynamically adjusting the panel's efficiency.



Predictive Maintenance

Sensors detect faults before failure, reducing downtime and optimizing long-term performance.



Self-Cleaning Mechanism

Autonomous robotic cleaning ensures panels remain dust-free, reducing maintenance costs.



Microgrid & Energy Storage

AI-powered battery storage systems enables efficient energy distribution and demand forecasting.

STANDARD

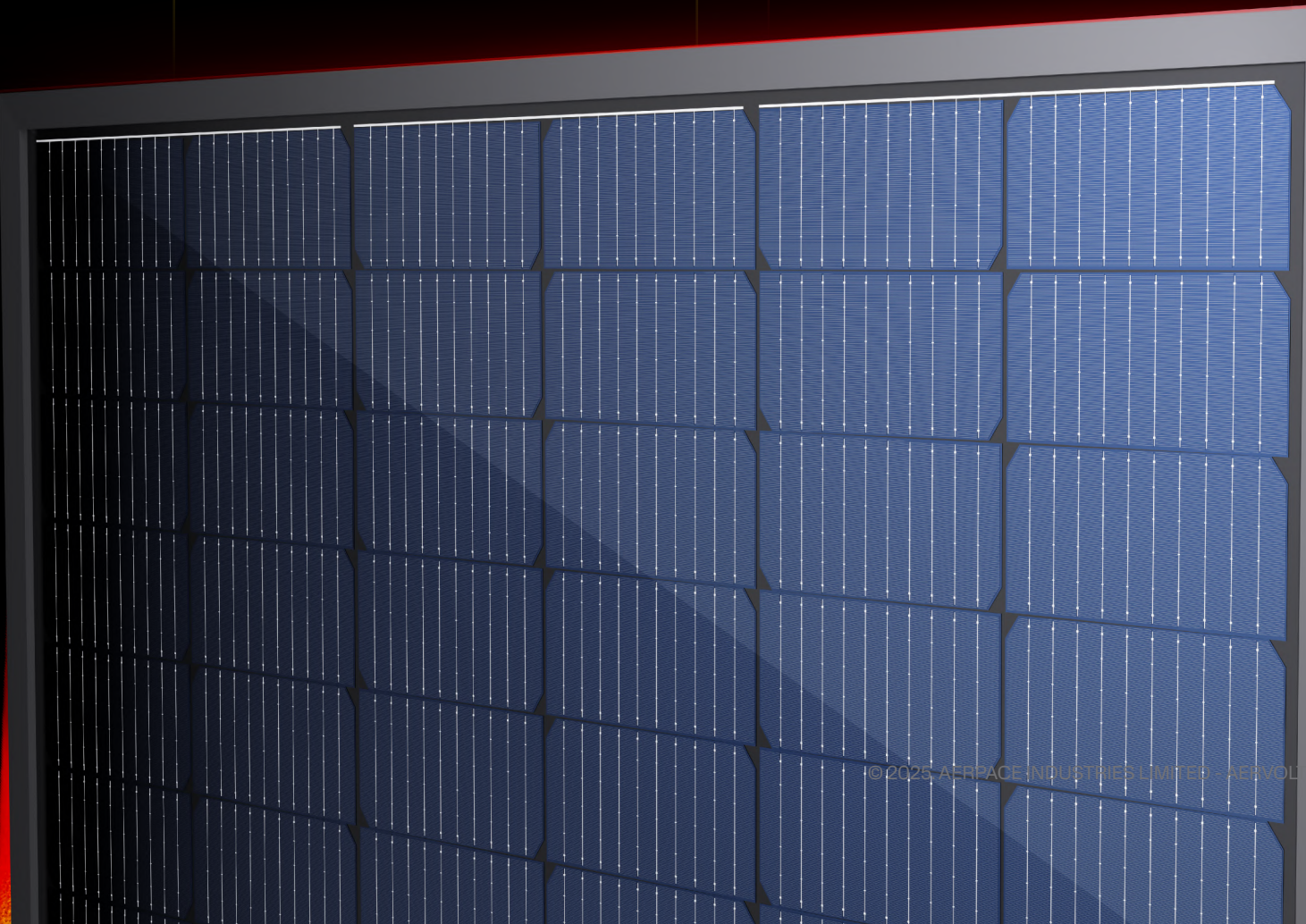
15 YEARS WARRANTY

Performance warranty
98% in Year 1
<0.45% degradation per year up to 30 years

EXTENDED

25 YEARS WARRANTY

25 years performance warranty with additional AI-integrated maintenance package



PERC | BIFACIAL | TOPCON

Cutting-edge, smart, AI-powered solar panels

Delivering unmatched performance, reliability, and resilience,
cementing aerVolt's position as a global leader in solar innovation.

aerVolt

NOVA SERIES

415W - 435W

Superior module efficiency up to 22.17%

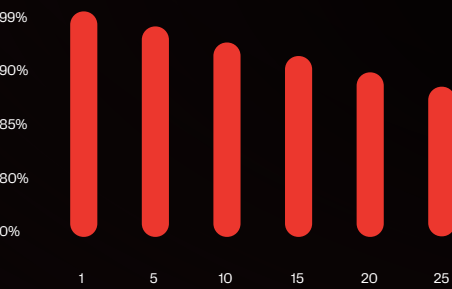
10-30% Additional power generation

ZERO LID (Light Induced Degradation)

Excellent weak light performance

89.04%

Power performance warranty



<1% first year power degradation | <0.40% year 2-25 power degradation. Contact aerVolt staff for additional AI-integrated maintenance package.

AI DRIVEN - SMART SOLAR PANELS

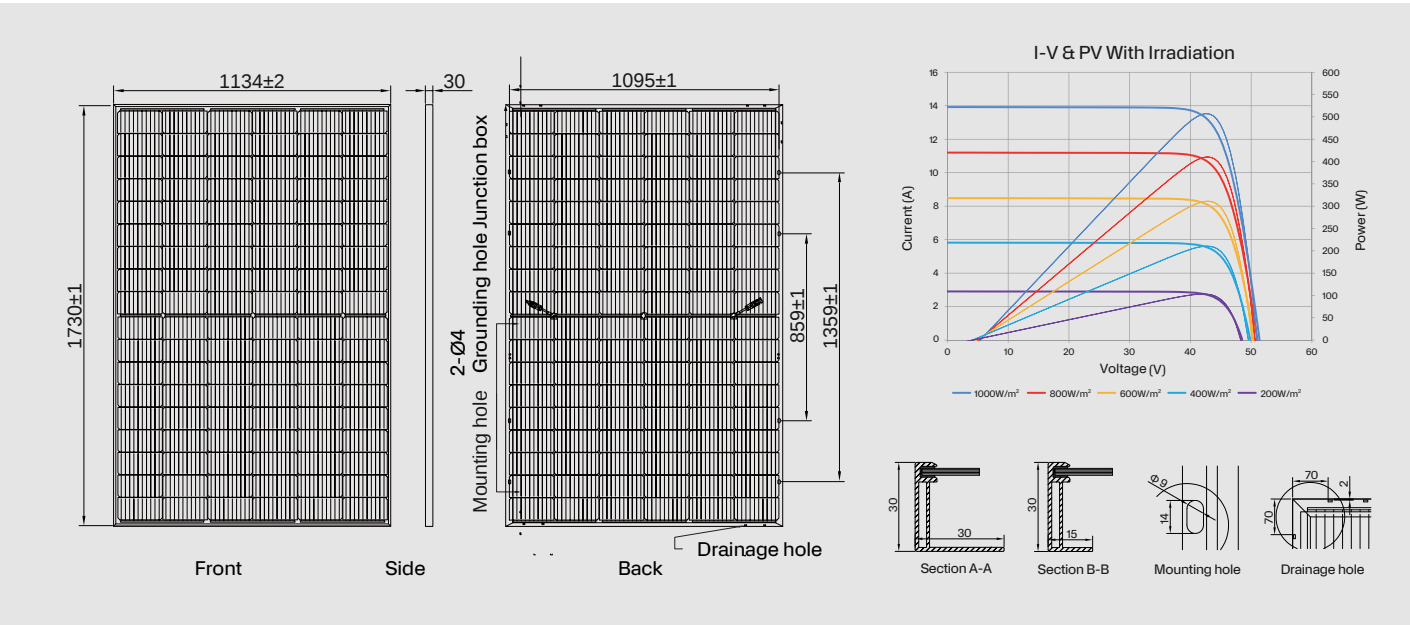
PRODUCT

25 YEARS WARRANTY

The regular product warranty is 12 years, for extended warranty, please contact aerVolt staff.

PRODUCT CERTIFICATIONS: IEC 61215: 2016, IEC 61730: 2016, IEC 61215:2005, IEC 61730-1 & 2: 2004, UL 61730, IEC 61853, IEC 62716, IEC 62804, IEC 61701, ISO 9001, ISO 14001

*All certifications are under process.



ELECTRICAL PARAMETER AT STC Bifacial Monocrystalline module

Module type	AV10-T108-GF				
Capacity rating – Pmax(Wp)	415	420	425	430	435
Power tolerance (%)	0-2	0-2	0-2	0-2	0-2
Module efficiency (%)	21.15	21.40	21.66	21.91	22.17
Rated voltage - Vmp(V)	31.31	31.50	31.69	31.87	32.06
Rated current - Imp(A)	13.26	13.34	13.42	13.50	13.58
Open circuit voltage - Voc(V)	37.91	38.10	38.29	38.48	38.67
Short circuit current - Isc(A)	14.00	14.08	14.16	14.24	14.32

Under Standard Test Conditions (STC) of irradiance 1000 W/m², spectrum AM 1.5 and Module temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±3%.

ELECTRICAL CHARACTERISTICS 10% REAR SIDE POWER GAIN##

Capacity rating – Pmax(Wp)	456	462	467	473	479
Rated voltage - Vmp(V)	31.31	31.50	31.69	31.87	32.06
Rated current - Imp(A)	14.59	14.67	14.76	14.85	14.94
Open circuit voltage - Voc(V)	37.91	38.10	38.29	38.48	38.67
Short circuit current - Isc(A)	15.40	15.49	15.58	15.66	15.75

Additional power gain from rear side compared to power offront side at STC depends on mounting structure (height, tilt angle etc.) and reflectivity of ground. Bi-Faciality Factor : 80 ± 5 %

- ###
- ▲ For handling & installation instructions, refer to aerVolt's installation manual available on the company website.
 - ▲ Before placing an order, confirm your requirements with our sales representative.
 - ▲ PV modules needs to be disposed as per goverment regulations, after it's life cycle.
 - ▲ Refer to aerVolt's warranty document for terms and conditions.
 - ▲ The specifications and characteristics contained in this datasheet may deviate slightly from our actual products due to the product developments and uncertainty of measurement devices.
 - ▲ The specifications included in the datasheet are subject to change without prior notice.

MECHANICAL SPECIFICATION

Solar cells	108 pcs TOPCon cell technology, Multi BB
Encapsulation	PID & UV resistance
Frame	Anodized Aluminium Alloy-Silver/Black/White/Rose Gold
Front glass	2.0 mm, High Transmission, AR Coated Tempered Glass
Back glass	2.0 mm, Heat Strengthened Glass
Dimensions	(L) 1730 mm x (W) 1134 mm x (H) 30 mm"
Weight	~22 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series fuse rating	30 A
Cable	4 mm², Solar cable 400mm/1400mm length
Connectors	MC4 Type
Application class	Class A
Electrical safety	Class II
Fire safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

PERMISSIBLE OPERATING CONDITIONS

Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
NMOT	45± 2°C
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s

TEMPERATURE COEFFICIENTS (TC)

Temperature coefficient (Voc)	-0.25% /°C
Temperature coefficient (Isc)	0.045% /°C
Temperature coefficient (Pmax)	-0.30% /°C

PACKAGING CONFIGURATION

Number of modules	36 pcs / pallet
Number of pallet	26
No of module, 40ft HC container	936

© 2025. AERPACE INDUSTRIES LIMITED - AERVOLT



aerVolt

NOVA SERIES

465W - 480W

Superior module efficiency up to 22.16%

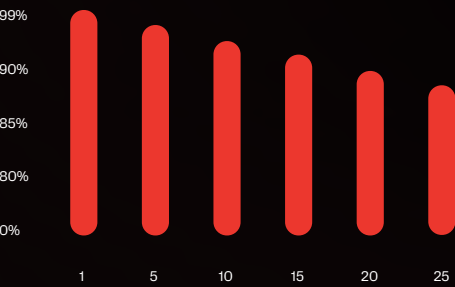
10-30% Additional power generation

ZERO LID (Light Induced Degradation)

Excellent weak light performance

89.04%

Power performance warranty



<1% first year power degradation | <0.40% year 2-25 power degradation. Contact aerVolt staff for additional AI-integrated maintenance package.

AI DRIVEN - SMART SOLAR PANELS

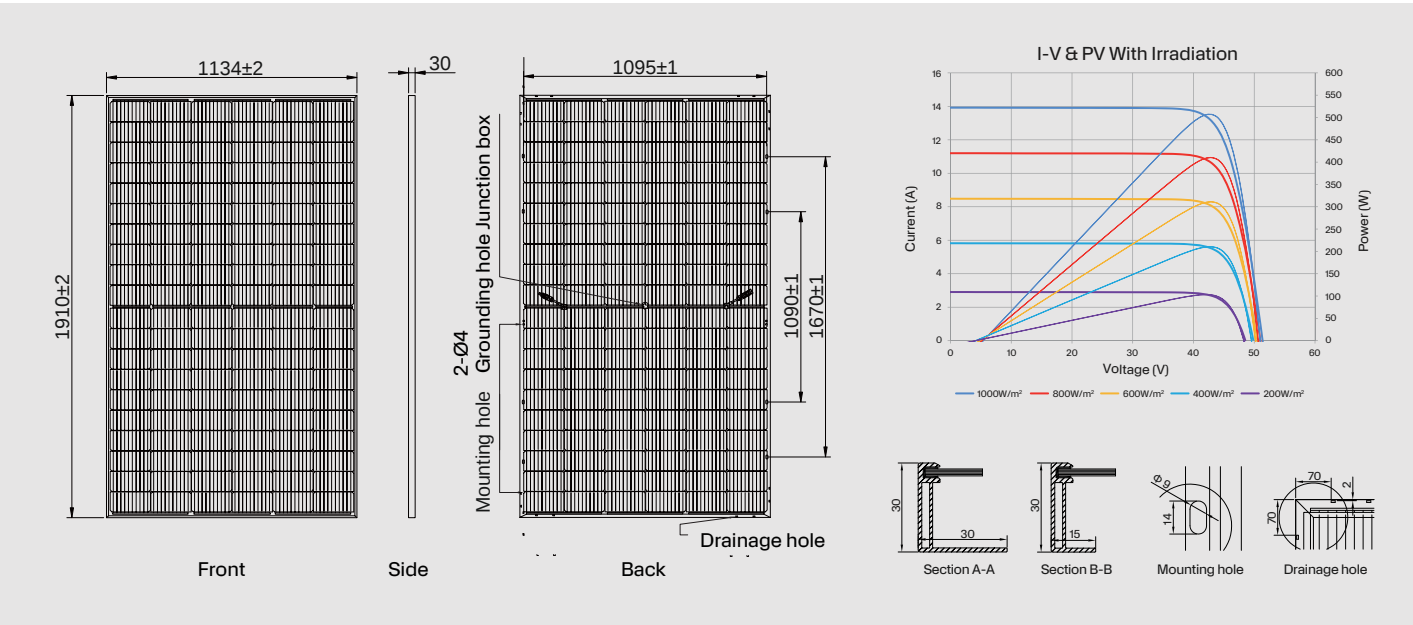
PRODUCT

25 YEARS WARRANTY

The regular product warranty is 12 years, for extended warranty, please contact aerVolt staff.

PRODUCT CERTIFICATIONS: IEC 61215: 2016, IEC 61730: 2016, IEC 61215:2005, IEC 61730-1 & 2: 2004, UL 61730, IEC 61853, IEC 62716, IEC 62804, IEC 61701, ISO 9001, ISO 14001

*All certifications are under process.



ELECTRICAL PARAMETER AT STC Bifacial Monocrystalline module

Module type	AV10-T120-GF			
Capacity rating – Pmax(Wp)	465	470	475	480
Power tolerance (%)	0~5	0~5	0~5	0~5
Module efficiency (%)	21.46	21.69	21.93	22.16
Rated voltage - Vmp(V)	34.99	35.11	35.24	35.38
Rated current - Imp(A)	13.29	13.39	13.48	13.57
Open circuit voltage - Voc(V)	42.38	42.52	42.66	42.80
Short circuit current - Isc(A)	14.03	14.12	14.20	14.29

Under Standard Test Conditions (STC) of irradiance 1000 W/m², spectrum AM 1.5 and Module temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±3%.

ELECTRICAL CHARACTERISTICS 10% REAR SIDE POWER GAIN#

Capacity rating – Pmax(Wp)	511	517	522	528
Rated voltage - Vmp(V)	34.99	35.11	35.24	35.38
Rated current - Imp(A)	14.61	14.72	14.82	14.92
Open circuit voltage - Voc(V)	42.38	42.52	42.66	42.80
Short circuit current - Isc(A)	15.43	15.53	15.62	15.71

Additional power gain from rear side compared to power offront side at STC depends on mounting structure (height, tilt angle etc.) and reflectivity of ground. Bi-Faciality Factor : 80 ± 5 %

- ###
- ▲ For handling & installation instructions, refer to aerVolt's installation manual available on the company website.
 - ▲ Before placing an order, confirm your requirements with our sales representative.
 - ▲ PV modules needs to be disposed as per government regulations, after it's life cycle.
 - ▲ Refer to aerVolt's warranty document for terms and conditions.
 - ▲ The specifications and characteristics contained in this datasheet may deviate slightly from our actual products due to the product developments and uncertainty of measurement devices.
 - ▲ The specifications included in the datasheet are subject to change without prior notice.

MECHANICAL SPECIFICATION

Solar cells	120 pcs TOPCon cell technology, Multi BB
Encapsulation	PID & UV resistance
Frame	Anodized Aluminium Alloy-Silver/Black/White/Rose Gold
Front glass	2.0 mm, High Transmission, AR Coated Tempered Glass
Back glass	2.0 mm, Heat Strengthened Glass
Dimensions	(L) 1910 mm x (W) 1134 mm x (H) 30 mm"
Weight	~28 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series fuse rating	30 A
Cable	4 mm², Solar cable 400mm/1400mm length
Connectors	MC4 Type
Application class	Class A
Electrical safety	Class II
Fire safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

PERMISSIBLE OPERATING CONDITIONS

Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
NMOT	45± 2°C
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s

TEMPERATURE COEFFICIENTS (TC)

Temperature coefficient (Voc)	-0.25% /°C
Temperature coefficient (Isc)	0.045% /°C
Temperature coefficient (Pmax)	-0.30% /°C

PACKAGING CONFIGURATION

Number of modules	36 pcs / pallet
Number of pallet	24
No of module, 40ft HC container	864

© 2025. AERPACE INDUSTRIES LIMITED - AERVOLT



aerVolt

NOVA SERIES

515W - 530W

Superior module efficiency up to 22.17%

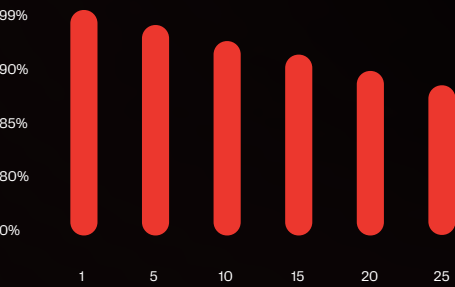
10-30% Additional power generation

ZERO LID (Light Induced Degradation)

Excellent weak light performance

89.04%

Power performance warranty



<1% first year power degradation | <0.40% year 2-25 power degradation. Contact aerVolt staff for additional AI-integrated maintenance package.

AI DRIVEN - SMART SOLAR PANELS

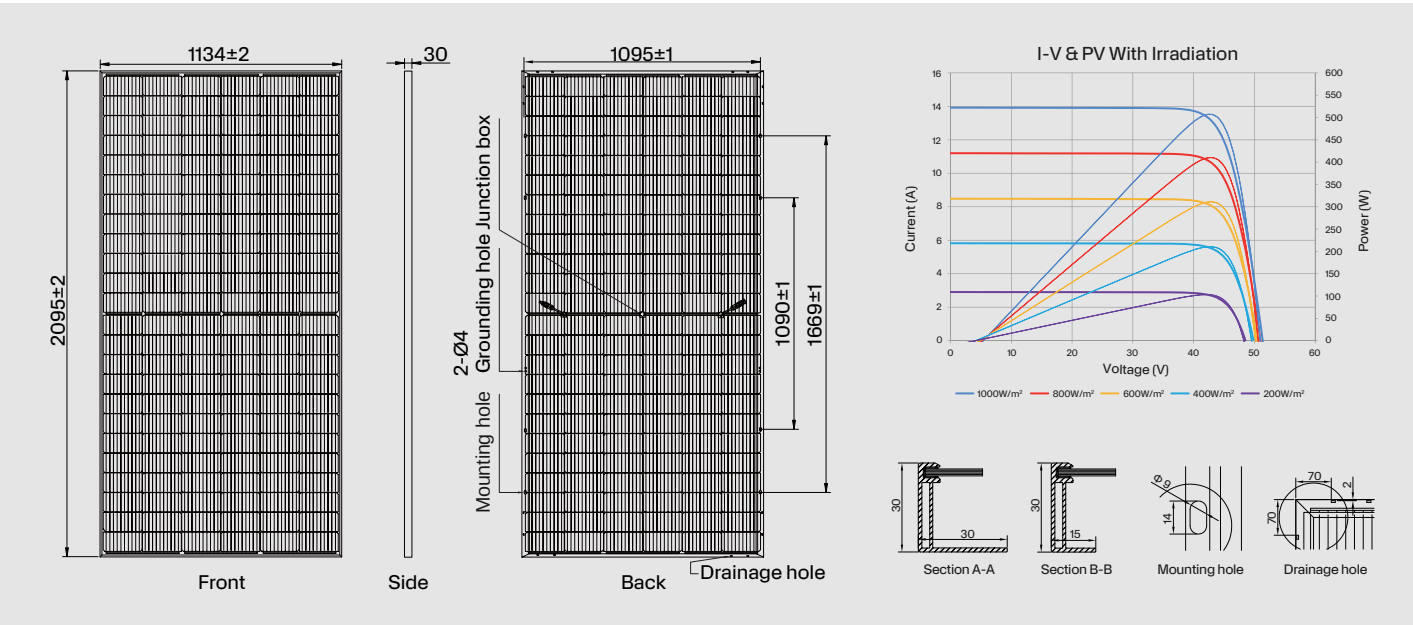
PRODUCT

25 YEARS
WARRANTY

The regular product warranty is 12 years, for extended warranty, please contact aerVolt staff.

PRODUCT CERTIFICATIONS: IEC 61215: 2016, IEC 61730: 2016, IEC 61215:2005, IEC 61730-1 & 2: 2004, UL 61730, IEC 61853, IEC 62716, IEC 62804, IEC 61701, ISO 9001, ISO 14001

*All certifications are under process.



ELECTRICAL PARAMETER AT STC

Bifacial Monocrystalline module				
Module type	AV10-T132-GF			
Capacity rating – Pmax(Wp)	515	520	525	530
Power tolerance (%)	0~5	0~5	0~5	0~5
Module efficiency (%)	21.67	21.88	22.09	22.30
Rated voltage - Vmp(V)	38.61	38.78	38.95	39.12
Rated current - Imp(A)	13.34	13.41	13.48	13.55
Open circuit voltage - Voc(V)	46.92	47.08	47.24	47.40
Short circuit current - Isc(A)	14.05	14.12	14.19	14.26

Under Standard Test Conditions (STC) of irradiance 1000 W/m², spectrum AM 1.5 and Module temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±3%.

ELECTRICAL CHARACTERISTICS 10% REAR SIDE POWER GAIN#

Capacity rating – Pmax(Wp)	566	572	577	583
Rated voltage - Vmp(V)	38.61	38.78	38.95	39.12
Rated current - Imp(A)	14.67	14.75	14.82	14.90
Open circuit voltage - Voc(V)	46.92	47.08	47.24	47.40
Short circuit current - Isc(A)	15.45	15.53	15.60	15.68

Additional power gain from rear side compared to power offront side at STC depends on mounting structure (height, tilt angle etc.) and reflectivity of ground. Bi-Faciality Factor : 80 ± 5 %

- ###
- ▲ For handling & installation instructions, refer to aerVolt's installation manual available on the company website.
 - ▲ Before placing an order, confirm your requirements with our sales representative.
 - ▲ PV modules needs to be disposed as per government regulations, after it's life cycle.
 - ▲ Refer to aerVolt's warranty document for terms and conditions.
 - ▲ The specifications and characteristics contained in this datasheet may deviate slightly from our actual products due to the product developments and uncertainty of measurement devices.
 - ▲ The specifications included in the datasheet are subject to change without prior notice.

MECHANICAL SPECIFICATION

Solar cells	132 pcs TOPCon cell technology, Multi BB
Encapsulation	PID & UV resistance
Frame	Anodized Aluminium Alloy-Silver/Black/White/Rose Gold
Front glass	2.0 mm, High Transmission, AR Coated Tempered Glass
Back glass	2.0 mm, Heat Strengthened Glass
Dimensions	(L) 2095 mm x (W) 1134 mm x (H) 30 mm"
Weight	~28.5 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series fuse rating	30 A
Cable	4 mm², Solar cable 400mm/1400mm length
Connectors	MC4 Type
Application class	Class A
Electrical safety	Class II
Fire safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

PERMISSIBLE OPERATING CONDITIONS

Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
NMOT	45± 2°C
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s

TEMPERATURE COEFFICIENTS (TC)

Temperature coefficient (Voc)	-0.25% /°C
Temperature coefficient (Isc)	0.045% /°C
Temperature coefficient (Pmax)	-0.30% /°C

PACKAGING CONFIGURATION

Number of modules	36 pcs / pallet
Number of pallet	22
No of module, 40ft HC container	792

© 2025. AERPACE INDUSTRIES LIMITED - AERVOLT



aerVolt

NOVA SERIES

555W - 585W

Superior module efficiency up to 24.50%

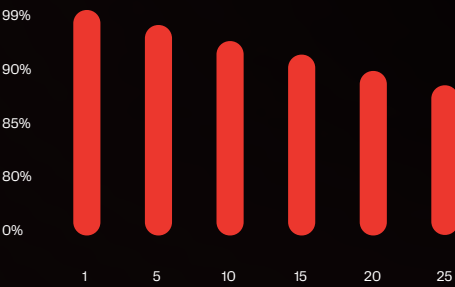
10-30% Additional power generation

ZERO LID (Light Induced Degradation)

Excellent weak light performance

89.04%

Power performance warranty



<1% first year power degradation | <0.40% year 2-25 power degradation. Contact aerVolt staff for additional AI-integrated maintenance package.

AI DRIVEN - SMART SOLAR PANELS

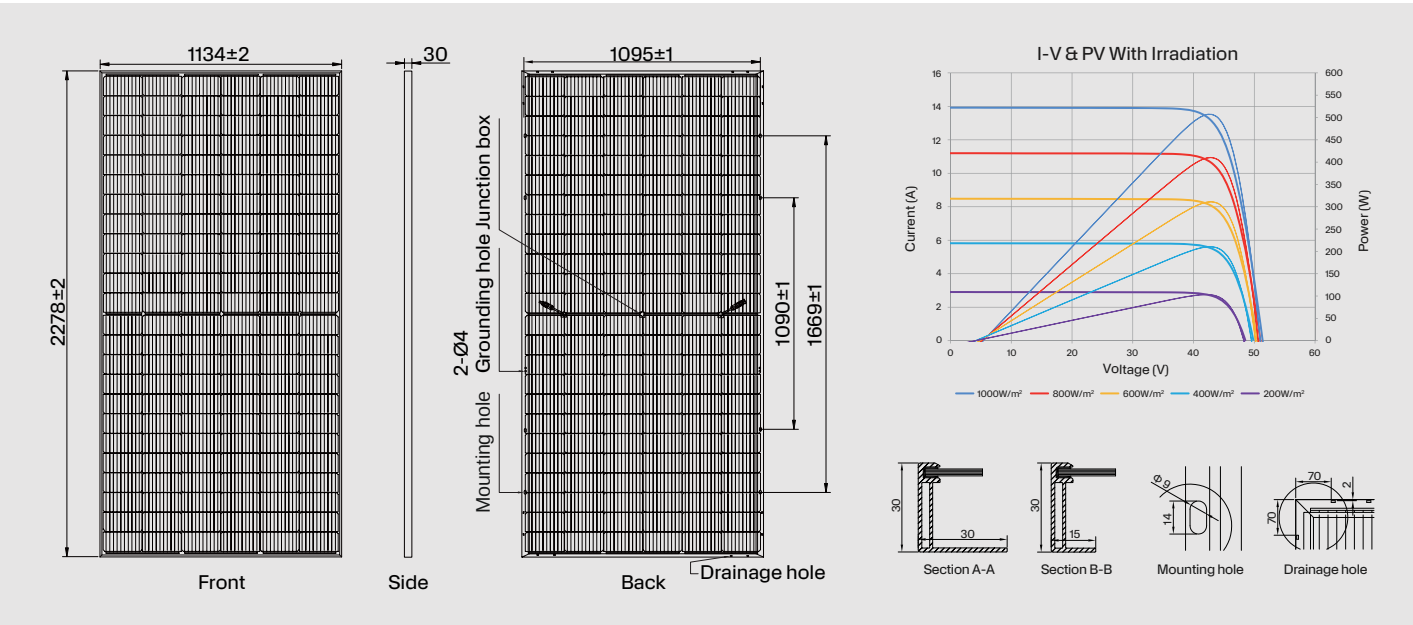
PRODUCT

25 YEARS WARRANTY

The regular product warranty is 12 years, for extended warranty, please contact aerVolt staff.

PRODUCT CERTIFICATIONS: IEC 61215: 2016, IEC 61730: 2016, IEC 61215:2005, IEC 61730-1 & 2: 2004, UL 61730, IEC 61853, IEC 62716, IEC 62804, IEC 61701, ISO 9001, ISO 14001

*All certifications are under process.



ELECTRICAL PARAMETER AT STC Bifacial Monocrystalline module

Module type	AV10-T144-GF			
Capacity rating – Pmax(Wp)	555	560	565	570
Power tolerance (%)	0~5	0~5	0~5	0~5
Module efficiency (%)	21.48	21.67	21.87	22.06
Rated voltage - Vmp(V)	42.20	42.40	42.60	42.80
Rated current - Imp(A)	13.16	13.21	13.27	13.32
Open circuit voltage - Voc(V)	50.48	50.68	50.88	51.08
Short circuit current - Isc(A)	14.06	14.12	14.18	14.24

Under Standard Test Conditions (STC) of irradiance 1000 W/m², spectrum AM 1.5 and Module temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±3%.

ELECTRICAL CHARACTERISTICS 10% REAR SIDE POWER GAIN#

Capacity rating – Pmax(Wp)	610	616	621	627
Rated voltage - Vmp(V)	42.20	42.40	42.60	42.80
Rated current - Imp(A)	14.47	14.53	14.59	14.65
Open circuit voltage - Voc(V)	50.48	50.68	50.88	51.08
Short circuit current - Isc(A)	15.46	15.53	15.59	15.66

Additional power gain from rear side compared to power offront side at STC depends on mounting structure (height, tilt angle etc.) and reflectivity of ground. Bi-Faciality Factor : 80 ± 5 %

- ###
- ▲ For handling & installation instructions, refer to aerVolt's installation manual available on the company website.
 - ▲ Before placing an order, confirm your requirements with our sales representative.
 - ▲ PV modules needs to be disposed as per government regulations, after it's life cycle.
 - ▲ Refer to aerVolt's warranty document for terms and conditions.
 - ▲ The specifications and characteristics contained in this datasheet may deviate slightly from our actual products due to the product developments and uncertainty of measurement devices.
 - ▲ The specifications included in the datasheet are subject to change without prior notice.

MECHANICAL SPECIFICATION

Solar cells	144 pcs TOPCon cell technology, Multi BB
Encapsulation	PID & UV resistance
Frame	Anodized Aluminium Alloy-Silver/Black/White/Rose Gold
Front glass	2.0 mm, High Transmission, AR Coated Tempered Glass
Back glass	2.0 mm, Heat Strengthened Glass
Dimensions	(L) 2278 mm x (W) 1134 mm x (H) 30 mm"
Weight	~32.5 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series fuse rating	30 A
Cable	4 mm², Solar cable 400mm/1400mm length
Connectors	MC4 Type
Application class	Class A
Electrical safety	Class II
Fire safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

PERMISSIBLE OPERATING CONDITIONS

Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
NMOT	45± 2°C
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s

TEMPERATURE COEFFICIENTS (TC)

Temperature coefficient (Voc)	-0.25% /°C
Temperature coefficient (Isc)	0.045% /°C
Temperature coefficient (Pmax)	-0.30% /°C

PACKAGING CONFIGURATION

Number of modules	36 pcs / pallet
Number of pallet	20
No of module, 40ft HC container	720

© 2025. AERPACE INDUSTRIES LIMITED - AERVOLT



aerVolt

NEX SERIES

525W - 550W

Superior module efficiency up to 24.03%

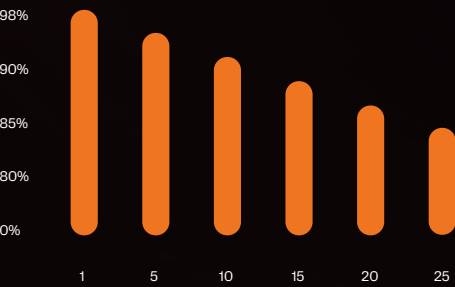
LID, PID, Sand, Ammonia and Salt corrosion resistant

Excellent low-light performance

IP68 Junction Box

83.50%

Power performance warranty



<2% first year power degradation | <0.55% year 2-25 power degradation. Contact aerVolt staff for additional AI-integrated maintenance package.

AI DRIVEN - SMART SOLAR PANELS

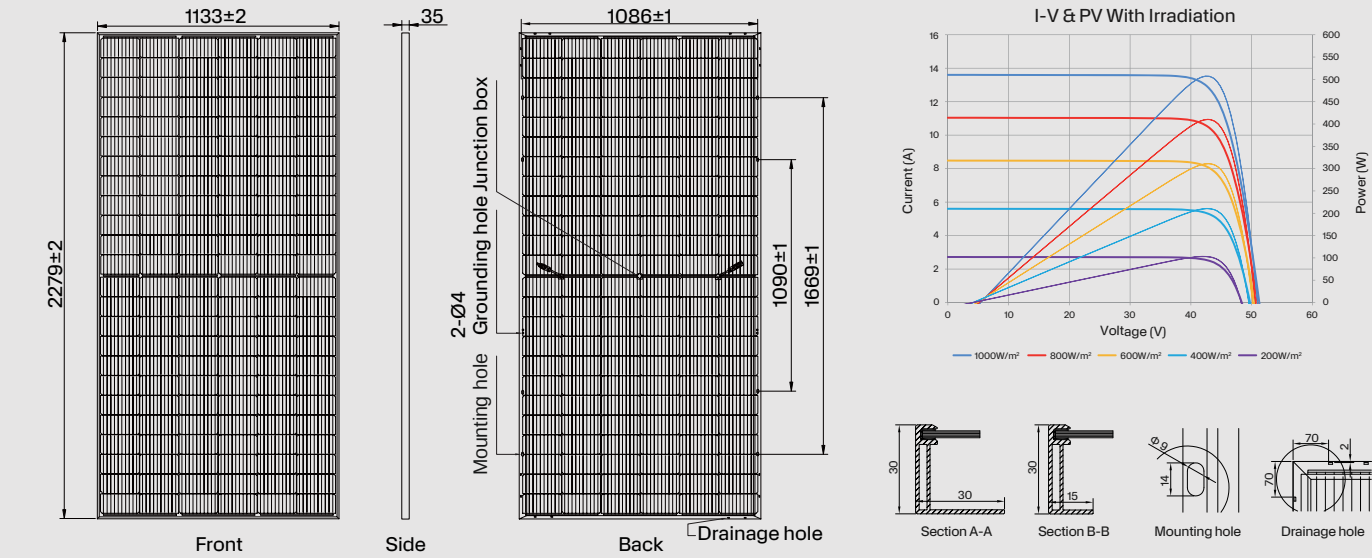
PRODUCT

25 YEARS WARRANTY

The regular product warranty is 12 years, for extended warranty, please contact aerVolt staff.

PRODUCT CERTIFICATIONS: IEC 61215: 2016, IEC 61730: 2016, IEC 61215:2005, IEC 61730-1 & 2: 2004, UL 61730, IEC 61853, IEC 62716, IEC 62804, IEC 61701, ISO 9001, ISO 14001

*All certifications are under process.



ELECTRICAL PARAMETER AT STC

Bifacial Monocrystalline module						
Module type	AV10-MB144-TF					
Capacity rating – Pmax(Wp)	525	530	535	540	545	550
Power tolerance (%)	0-2	0-2	0-2	0-2	0-2	0-2
Module efficiency (%)	20.33	20.53	20.72	20.91	21.11	21.30
Rated voltage - Vmp(V)	40.88	41.50	41.20	41.39	41.55	41.71
Rated current - Imp(A)	12.84	12.91	12.98	13.05	13.12	13.19
Open circuit voltage - Voc(V)	48.72	48.91	49.10	49.29	49.48	49.67
Short circuit current - Isc(A)	13.43	13.51	13.59	13.67	13.75	13.83

Under Standard Test Conditions (STC) of irradiance 1000 W/m², spectrum AM 1.5 and Module temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±3%.

ELECTRICAL PARAMETER AT NMOT

Capacity rating – Pmax(Wp)	388	392	396	399	403	407
Rated voltage - Vmp(V)	38.13	38.28	38.42	38.60	38.75	38.90
Rated current - Imp(A)	10.19	10.24	10.30	10.35	10.41	10.47
Open circuit voltage - Voc(V)	45.56	45.74	45.92	46.09	46.27	46.45
Short circuit current - Isc(A)	10.81	10.88	10.94	11.01	11.07	11.14

Irradiance 800 W/m , ambient temperature 20°C, wind speed 1 m/sec

ELECTRICAL CHARACTERISTICS 10% REAR SIDE POWER GAIN#

Capacity rating – Pmax(Wp)	578	583	589	594	600	605
Rated voltage - Vmp(V)	40.88	41.05	41.20	41.39	41.55	41.71
Rated current - Imp(A)	14.12	14.19	14.27	14.35	14.45	14.50
Open circuit voltage - Voc(V)	48.72	48.91	49.10	49.29	49.48	49.67
Short circuit current - Isc(A)	14.77	14.86	14.94	15.03	15.12	15.21

Additional power gain from rear side compared to power offront side at STC depends on mounting structure (height, tilt angle etc.) and reflectivity of ground. Bi-Faciality Factor : 70 ± 5 %

© 2025. AERPACE INDUSTRIES LIMITED - AERVOLT

MECHANICAL SPECIFICATION

Solar cells	144 pcs Bifacial monocrystalline Silicon(PERC), Multi BB
Encapsulation	PID & UV resistance
Backside	Transparent backsheet-White/Black Mesh Type
Frame	Anodized Aluminium Alloy-Silver/Black/White/Rose Gold
Solar glass	3.2 mm, High Transmission, AR Coated Tempered Glass
Dimensions	(L) 2279 mm x (W) 1133 mm x (H) 35 mm"
Weight	~28 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series fuse rating	25 A
Cable	4 mm², Solar cable 400mm/1400mm length
Connectors	MC4 Type
Application class	Class A
Electrical safety	Class II
Fire safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

PERMISSIBLE OPERATING CONDITIONS

Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
NMOT	45± 2°C
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s

TEMPERATURE COEFFICIENTS (TC)

Temperature coefficient (Voc)	-0.28% /°C
Temperature coefficient (Isc)	0.048% /°C
Temperature coefficient (Pmax)	-0.35% /°C

PACKAGING CONFIGURATION

Number of modules	31 pcs / pallet
Number of pallet	20
No of module, 40ft HC container	620



aerVolt

NEX SERIES

525W - 585W

Superior module efficiency up to 24.50%

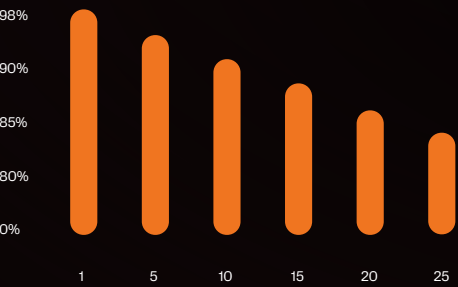
LID, PID, Sand, Ammonia and Salt corrosion resistant

Excellent low-light performance

IP68 Junction Box

84.80%

Power performance warranty



<2% first year power degradation | <0.55% year 2-25 power degradation. Contact aerVolt staff for additional AI-integrated maintenance package.

AI DRIVEN - SMART SOLAR PANELS

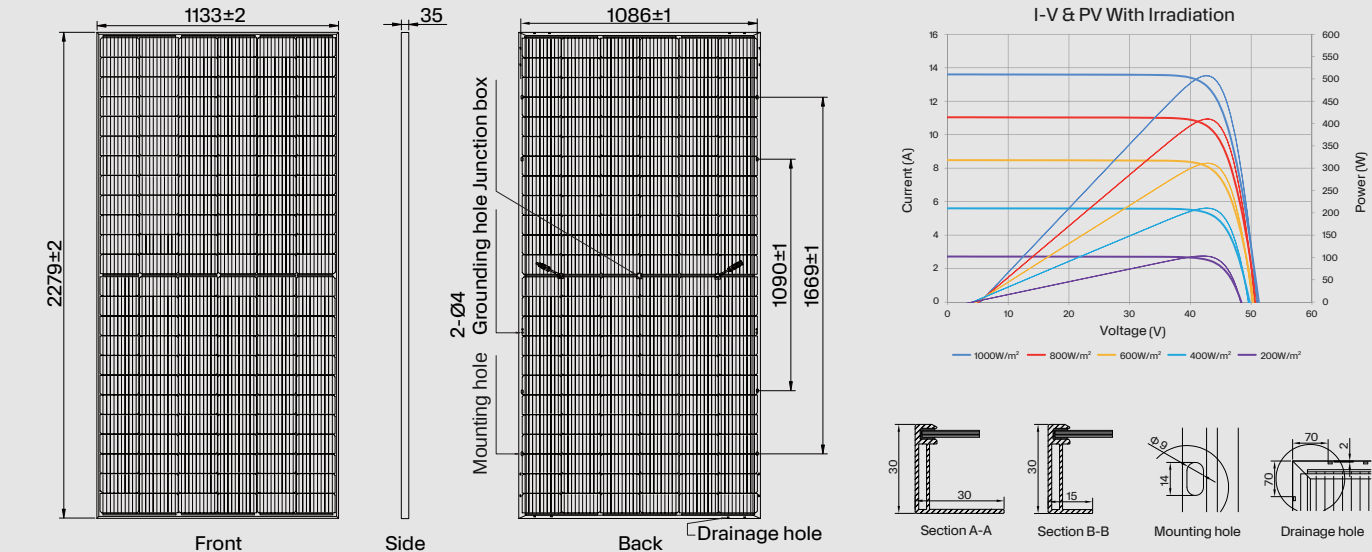
PRODUCT

25 YEARS WARRANTY

The regular product warranty is 12 years, for extended warranty, please contact aerVolt staff.

PRODUCT CERTIFICATIONS: IEC 61215: 2016, IEC 61730: 2016, IEC 61215:2005, IEC 61730-1 & 2: 2004, UL 61730, IEC 61853, IEC 62716, IEC 62804, IEC 61701, ISO 9001, ISO 14001

*All certifications are under process.



ELECTRICAL PARAMETER AT STC Bifacial Monocrystalline module

Module type	AV10-MB144-GF					
Capacity rating – Pmax(Wp)	525	530	535	540	545	550
Power tolerance (%)	0-2	0-2	0-2	0-2	0-2	0-2
Module efficiency (%)	20.33	20.53	20.72	20.91	21.11	21.30
Rated voltage - Vmp(V)	40.68	41.88	41.04	41.27	41.45	41.63
Rated current - Imp(A)	12.91	12.96	13.03	13.10	13.16	13.22
Open circuit voltage - Voc(V)	49.05	49.21	49.39	49.56	49.73	49.90
Short circuit current - Isc(A)	13.42	13.49	13.56	13.63	13.70	13.77

Under Standard Test Conditions (STC) of irradiance 1000 W/m², spectrum AM 1.5 and Module temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±3%.

ELECTRICAL PARAMETER AT NMOT

Capacity rating – Pmax(Wp)	389	392	396	399	403	407
Rated voltage - Vmp(V)	37.94	38.13	38.28	38.49	38.66	38.83
Rated current - Imp(A)	10.24	10.28	10.34	10.39	10.44	10.49
Open circuit voltage - Voc(V)	45.87	46.02	46.19	46.35	46.50	46.66
Short circuit current - Isc(A)	10.81	10.86	10.92	10.98	11.03	11.09

Irradiance 800 W/m , ambient temperature 20°C, wind speed 1 m/sec

ELECTRICAL CHARACTERISTICS 10% REAR SIDE POWER GAIN#

Capacity rating – Pmax(Wp)	578	583	589	594	600	605
Rated voltage - Vmp(V)	40.68	41.88	41.04	41.27	41.45	41.63
Rated current - Imp(A)	14.20	14.25	14.33	14.41	14.47	14.54
Open circuit voltage - Voc(V)	49.05	49.21	49.39	49.56	49.73	49.90
Short circuit current - Isc(A)	14.76	14.83	14.91	14.99	15.07	15.14

Additional power gain from rear side compared to power offront side at STC depends on mounting structure (height, tilt angle etc.) and reflectivity of ground. Bi-Faciality Factor : 70 ± 5 %

MECHANICAL SPECIFICATION

Solar cells	144 pcs Bifacial monocrystalline Silicon(PERC), Multi BB
Encapsulation	PID & UV resistance
Frame	Anodized Aluminium Alloy-Silver/Black/White/Rose Gold
Front glass	3.2 mm, High Transmission, AR Coated Tempered Glass
Back glass	2.0 mm, Heat Strengthened Glass
Dimensions	(L) 2279 mm x (W) 1133 mm x (H) 35 mm"
Weight	~32 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series fuse rating	25 A
Cable	4 mm², Solar cable 400mm/1400mm length
Connectors	MC4 Type
Application class	Class A
Electrical safety	Class II
Fire safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

PERMISSIBLE OPERATING CONDITIONS

Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
NMOT	45± 2°C
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s

TEMPERATURE COEFFICIENTS (TC)

Temperature coefficient (Voc)	-0.25% /°C
Temperature coefficient (Isc)	0.050% /°C
Temperature coefficient (Pmax)	-0.32% /°C

PACKAGING CONFIGURATION

Number of modules	31 pcs / pallet
Number of pallet	20
No of module, 40ft HC container	620

© 2025. AERPACE INDUSTRIES LIMITED - AERVOLT



aerVolt

NIMBUS SER.

525W - 540W

Superior module efficiency up to 20.91%

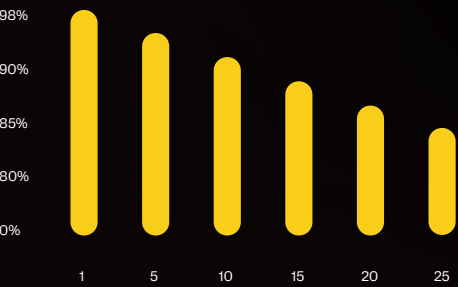
LID, PID, Sand, Ammonia and Salt corrosion resistant

Excellent low-light performance

IP68 Junction Box

84.80%

Power performance warranty



<2% first year power degradation | <0.55% year 2-25 power degradation. Contact aerVolt staff for additional AI-integrated maintenance package.

AI DRIVEN - SMART SOLAR PANELS

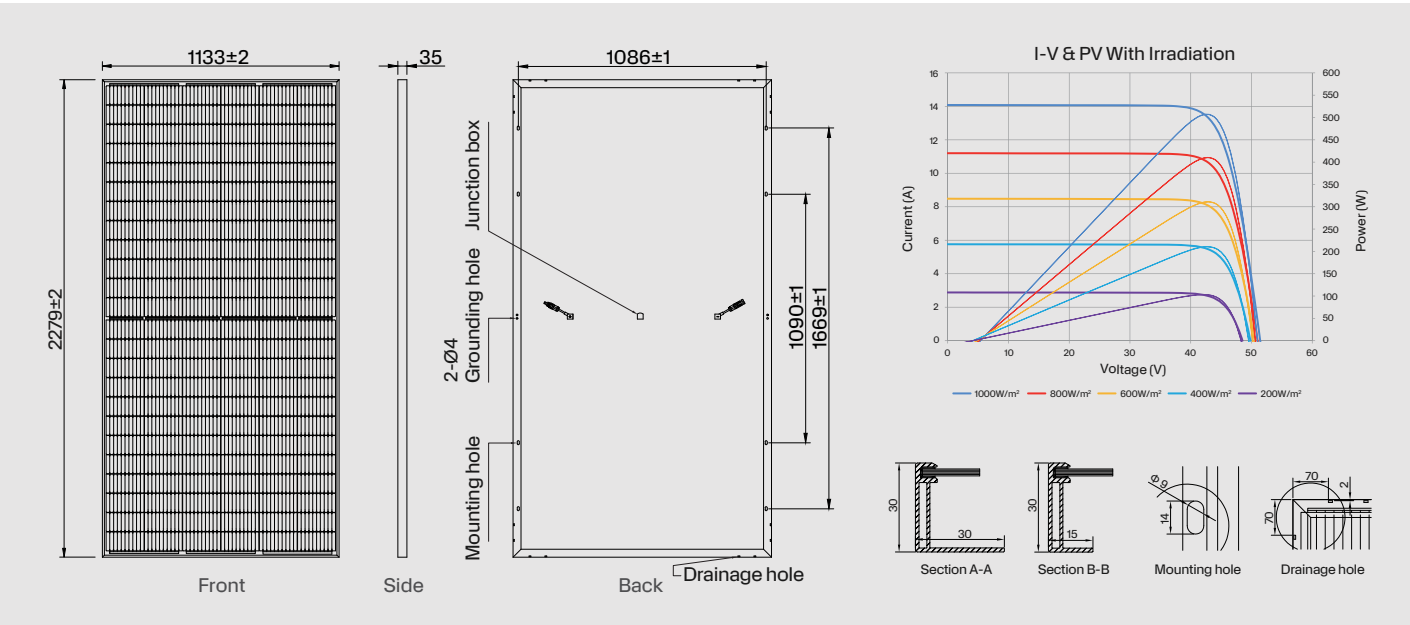
PRODUCT

25 YEARS
WARRANTY

The regular product warranty is 12 years, for extended warranty, please contact aerVolt staff.

PRODUCT CERTIFICATIONS: IEC 61215: 2016, IEC 61730: 2016, IEC 61215:2005, IEC 61730-1 & 2: 2004, UL 61730, IEC 61853, IEC 62716, IEC 62804, IEC 61701, ISO 9001, ISO 14001

*All certifications are under process.



ELECTRICAL PARAMETER AT STC Monocrystalline module

Module type	AV10-MB144-BF			
Capacity rating – Pmax(Wp)	525	530	535	540
Power tolerance (%)	0-2	0-2	0-2	0-2
Module efficiency (%)	20.33	20.53	20.72	20.91
Rated voltage - Vmp(V)	41.28	41.51	41.75	41.97
Rated current - Imp(A)	12.70	12.75	12.80	12.85
Open circuit voltage - Voc(V)	50.02	50.21	50.40	50.61
Short circuit current - Isc(A)	13.20	13.24	13.28	13.33

Under Standard Test Conditions (STC) of irradiance 1000 W/m², spectrum AM 1.5 and Module temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±3%.

ELECTRICAL PARAMETER AT NMOT

Capacity rating – Pmax(Wp)	389	392	396	399
Rated voltage - Vmp(V)	38.50	38.71	38.94	39.14
Rated current - Imp(A)	10.08	10.12	10.16	10.20
Open circuit voltage - Voc(V)	46.78	46.96	47.13	47.33
Short circuit current - Isc(A)	10.63	10.66	10.69	10.73

Irradiance 800 W/m , ambient temperature 20°C, wind speed 1 m/sec

- ###
- ▲ For handling & installation instructions, refer to aerVolt's installation manual available on the company website.
 - ▲ Before placing an order, confirm your requirements with our sales representative.
 - ▲ PV modules needs to be disposed as per government regulations, after it's life cycle.
 - ▲ Refer to aerVolt's warranty document for terms and conditions.
 - ▲ The specifications and characteristics contained in this datasheet may deviate slightly from our actual products due to the product developments and uncertainty of measurement devices.
 - ▲ The specifications included in the datasheet are subject to change without prior notice.

MECHANICAL SPECIFICATION

Solar cells	144 pcs Monocrystalline Silicon(PERC), Multi BB
Encapsulation	PID & UV resistance
Backside	UV protected black backsheet
Frame	Anodized Aluminium Alloy-Silver/Black/White/Rose Gold
Solar glass	3.2 mm, High Transmission, AR Coated Tempered Glass
Dimensions	(L) 2279 mm x (W) 1133 mm x (H) 35 mm"
Weight	~28 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series fuse rating	25 A
Cable	4 mm², Solar cable 400mm/1400mm length
Connectors	MC4 Type
Application class	Class A
Electrical safety	Class II
Fire safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

PERMISSIBLE OPERATING CONDITIONS

Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
NMOT	45± 2°C
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s

TEMPERATURE COEFFICIENTS (TC)

Temperature coefficient (Voc)	-0.28% /°C
Temperature coefficient (Isc)	0.048% /°C
Temperature coefficient (Pmax)	-0.35% /°C

PACKAGING CONFIGURATION

Number of modules	31 pcs / pallet
Number of pallet	20
No of module, 40ft HC container	620

© 2025. AERPACE INDUSTRIES LIMITED - AERVOLT



aerVolt

NIMBUS SER.

500W - 550W

Superior module efficiency up to 21.30%

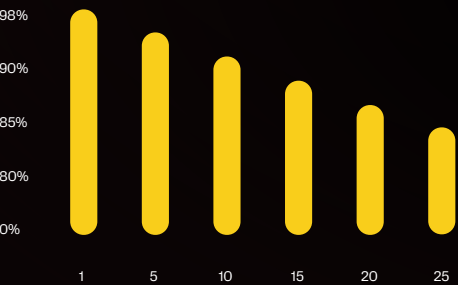
LID, PID, Sand, Ammonia and Salt corrosion resistant

Excellent low-light performance

IP68 Junction Box

84.80%

Power performance warranty



<2% first year power degradation | <0.55% year 2-25 power degradation. Contact aerVolt staff for additional AI-integrated maintenance package.

AI DRIVEN - SMART SOLAR PANELS

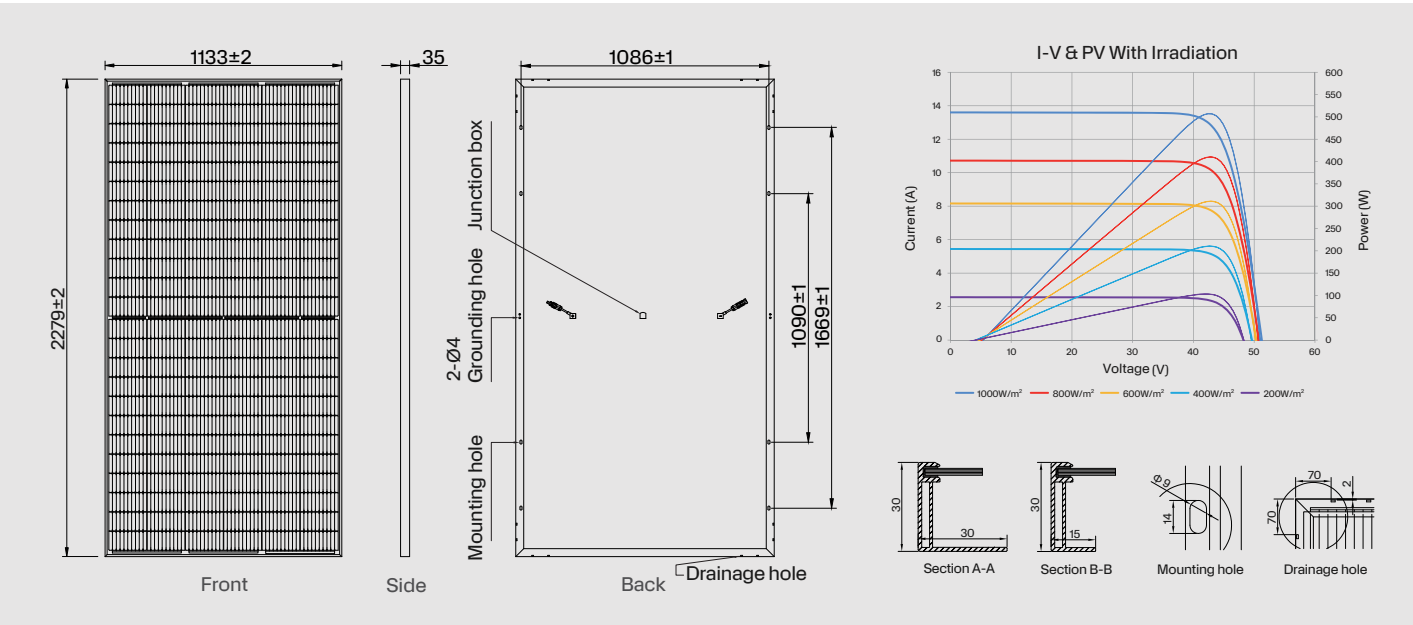
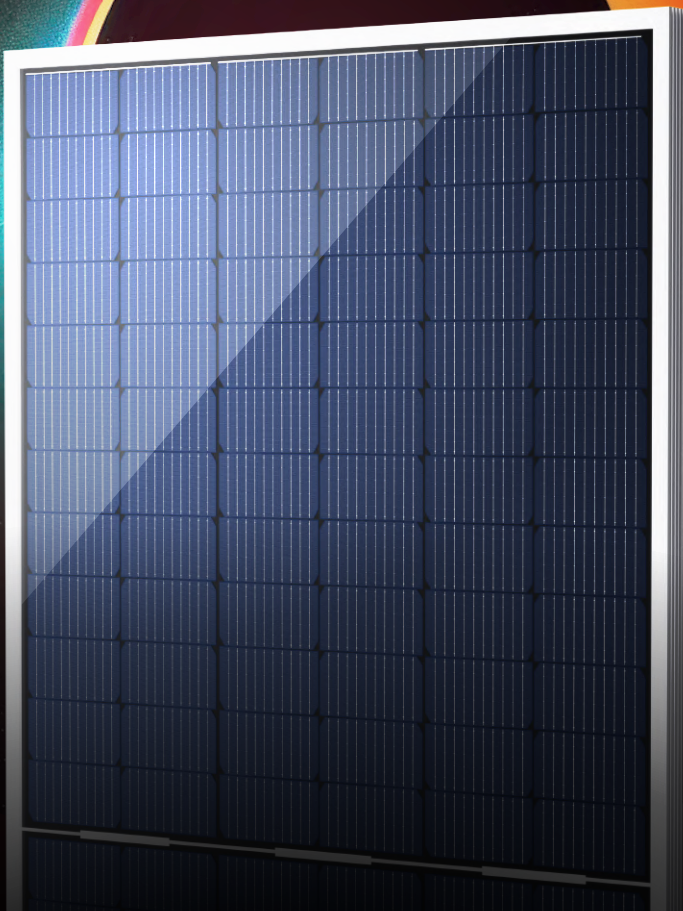
PRODUCT

25 YEARS WARRANTY

The regular product warranty is 12 years, for extended warranty, please contact aerVolt staff.

PRODUCT CERTIFICATIONS: IEC 61215: 2016, IEC 61730: 2016, IEC 61215:2005, IEC 61730-1 & 2: 2004, UL 61730, IEC 61853, IEC 62716, IEC 62804, IEC 61701, ISO 9001, ISO 14001

*All certifications are under process.



ELECTRICAL PARAMETER AT STC Monocrystalline module

Module type	AV10-MB144-WF										
Capacity rating - Pmax(Wp)	500	505	510	515	520	525	530	535	540	545	550
Power tolerance (%)	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2
Module Efficiency (%)	19.36	19.56	19.75	19.94	20.14	20.33	20.53	20.72	20.91	21.10	21.30
Rated voltage - Vmp(V)	40.14	40.37	40.60	40.83	41.06	41.28	41.51	41.75	41.97	42.20	42.42
Rated current - Imp(A)	12.46	12.50	12.55	12.60	12.65	12.70	12.75	12.80	12.85	12.90	12.94
Open circuit voltage - Voc(V)	49.07	49.26	49.45	49.64	49.83	50.02	50.21	50.40	50.61	50.80	50.90
Short circuit current - Isc(A)	13.00	13.04	13.08	13.12	13.16	13.20	13.24	13.28	13.33	13.36	13.39

Under Standard Test Conditions (STC) of Irradiance 1000 W/m², spectrum AM 1.5 and Module temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±3%.

ELECTRICAL PARAMETER AT NMOT

Capacity rating - Pmax(Wp)	370	374	378	381	385	389	392	396	400	403	407
Rated voltage - Vmp(V)	37.44	37.65	37.86	38.08	38.29	38.50	38.71	38.94	39.14	39.36	39.56
Rated current - Imp(A)	9.88	9.92	9.96	10.00	10.04	10.08	10.12	10.16	10.20	10.24	10.27
Open circuit voltage - Voc(V)	45.89	46.07	46.24	46.42	46.60	46.78	46.96	47.13	47.33	47.51	47.60
Short circuit current - Isc(A)	10.47	10.50	10.53	10.57	10.60	10.63	10.66	10.69	10.73	10.76	10.78

Irradiance 800 W/m , ambient temperature 20°C, wind speed 1 m/sec

The specifications and characteristics contained in this datasheet may deviate slightly from our actual products due to the product developments and uncertainty of measurement devices. The specifications included in the datasheet are subject to change without prior notice.

MECHANICAL SPECIFICATION

Solar cells	144 pcs Monocrystalline Silicon(PERC), Multi BB
Encapsulation	PID & UV resistance
Backside	UV protected black backsheet
Frame	Anodized Aluminium Alloy-Silver/Black/White/Rose Gold
Solar glass	3.2 mm, High Transmission, AR Coated Tempered Glass
Dimensions	(L) 2279 mm x (W) 1133 mm x (H) 35 mm"
Weight	~28 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series fuse rating	25 A
Cable	4 mm², Solar cable 400mm/1400mm length
Connectors	MC4 Type
Application class	Class A
Electrical safety	Class II
Fire safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

PERMISSIBLE OPERATING CONDITIONS

Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
NMOT	45± 2°C
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s

TEMPERATURE COEFFICIENTS (TC)

Temperature coefficient (Voc)	-0.28% /°C
Temperature coefficient (Isc)	0.048% /°C
Temperature coefficient (Pmax)	-0.34% /°C

PACKAGING CONFIGURATION

Number of modules	31 pcs / pallet
Number of pallet	20
No of module, 40ft HC container	620

© 2025. AERPACE INDUSTRIES LIMITED - AERVOLT



aerVolt

NIMBUS SER.

525W - 555W

Superior module efficiency up to 21.49%

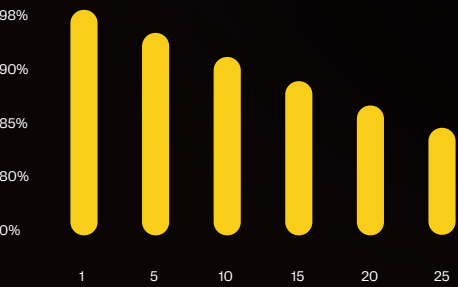
LID, PID, Sand, Ammonia and Salt corrosion resistant

Excellent low-light performance

IP68 Junction Box

84.80%

Power performance warranty



<2% first year power degradation | <0.55% year 2-25 power degradation. Contact aerVolt staff for additional AI-integrated maintenance package.

AI DRIVEN - SMART SOLAR PANELS

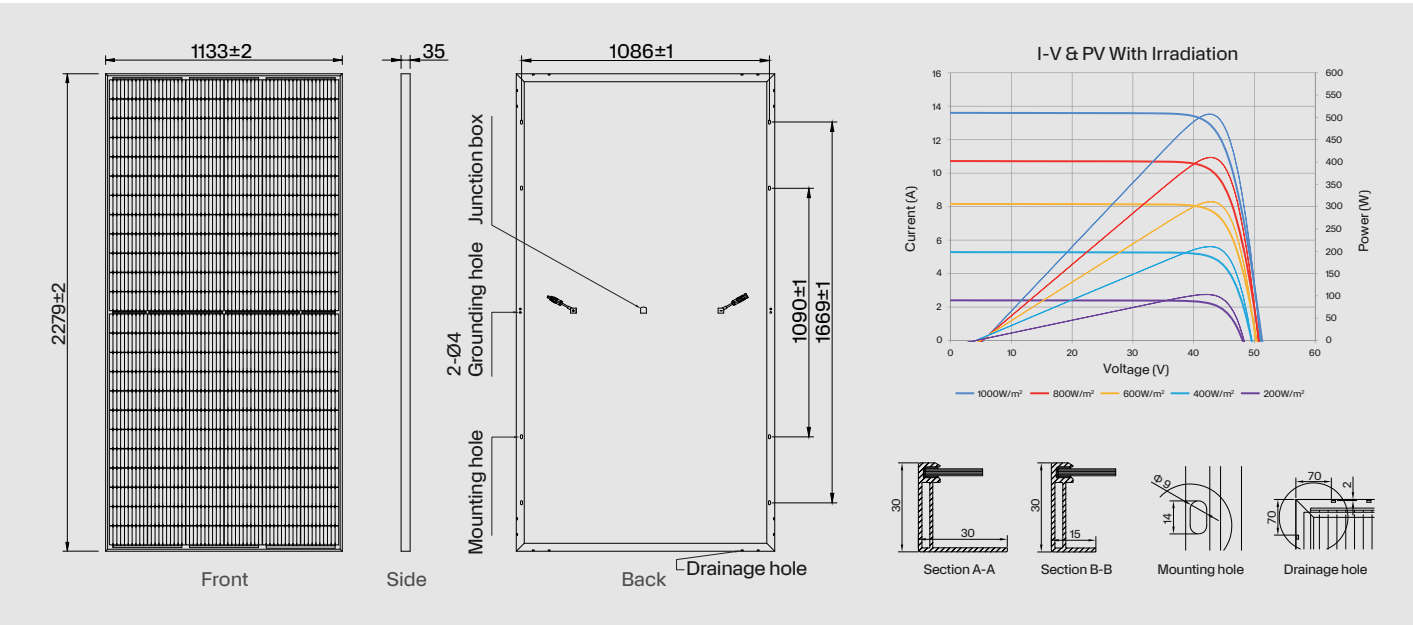
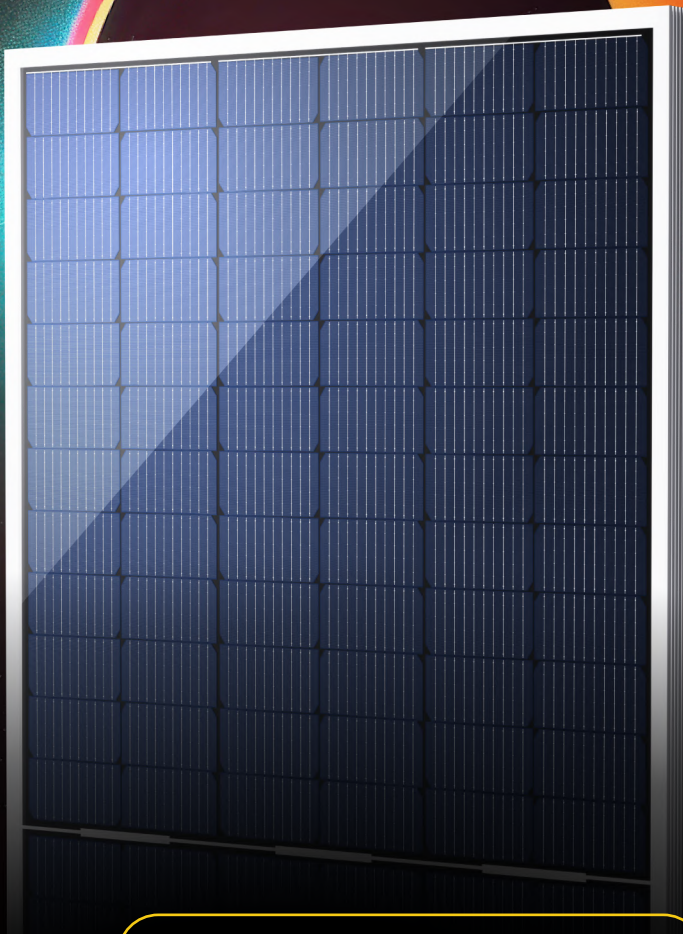
PRODUCT

25 YEARS
WARRANTY

The regular product warranty is 12 years, for extended warranty, please contact aerVolt staff.

PRODUCT CERTIFICATIONS: IEC 61215: 2016, IEC 61730: 2016, IEC 61215:2005, IEC 61730-1 & 2: 2004, UL 61730, IEC 61853, IEC 62716, IEC 62804, IEC 61701, ISO 9001, ISO 14001

*All certifications are under process.



ELECTRICAL PARAMETER AT STC		Monocrystalline module					
Module type	AV10-MB144-WF						
Capacity rating – Pmax(Wp)	525	530	535	540	550	555	
Power tolerance (%)	0-2	0-2	0-2	0-2	0-2	0-2	
Module efficiency (%)	20.33	20.53	20.72	20.91	21.30	21.49	
Rated voltage - Vmp(V)	41.28	41.51	41.75	41.97	42.42	42.66	
Rated current - Imp(A)	12.70	12.75	12.80	12.85	12.94	13.01	
Open circuit voltage - Voc(V)	50.02	50.21	50.40	50.61	50.90	51.00	
Short circuit current - Isc(A)	13.20	13.24	13.28	13.33	13.39	13.60	
Under Standard Test Conditions (STC) of irradiance 1000 W/m², spectrum AM 1.5 and Module temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±3%.							

ELECTRICAL PARAMETER AT NMOT								
Capacity rating – Pmax(Wp)	389	392	396	400	404	407	411	
Rated voltage - Vmp(V)	38.50	38.71	38.94	39.14	39.36	39.56	39.79	
Rated current - Imp(A)	10.08	10.12	10.16	10.20	10.24	10.27	10.32	
Open circuit voltage - Voc(V)	46.78	46.96	47.13	47.33	47.51	47.60	47.69	
Short circuit current - Isc(A)	10.63	10.66	10.69	10.73	10.76	10.78	10.95	
Irradiance 800 W/m , ambient temperature 20°C, wind speed 1 m/sec								

- ###
- ▲ For handling & installation instructions, refer to aerVolt's installation manual available on the company website.
 - ▲ Before placing an order, confirm your requirements with our sales representative.
 - ▲ PV modules needs to be disposed as per government regulations, after it's life cycle.
 - ▲ Refer to aerVolt's warranty document for terms and conditions.
 - ▲ The specifications and characteristics contained in this datasheet may deviate slightly from our actual products due to the product developments and uncertainty of measurement devices.
 - ▲ The specifications included in the datasheet are subject to change without prior notice.

MECHANICAL SPECIFICATION	
Solar cells	144 pcs monocrystalline Silicon, Multi BB
Encapsulation	PID & UV resistance
Backside	UV protected reflective backsheet
Frame	Anodized Aluminium Alloy-Silver/Black/White/Rose Gold
Solar glass	3.2 mm, High Transmission, AR Coated Tempered Glass
Dimensions	(L) 2279 mm x (W) 1133 mm x (H) 35 mm"
Weight	~28 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series fuse rating	25 A
Cable	4 mm², Solar cable 400mm/1400mm length
Connectors	M 4 Type
Application class	Class A
Electrical safety	Class II
Fire safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

PERMISSIBLE OPERATING CONDITIONS	
Temperature range	-40°C to + 85°C
Maximum system voltage	1500 VDC
NMOT	45± 2°C
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s

TEMPERATURE COEFFICIENTS (TC)	
Temperature coefficient (Voc)	-0.28% /°C
Temperature coefficient (Isc)	0.048% /°C
Temperature coefficient (Pmax)	-0.34% /°C

PACKAGING CONFIGURATION	
Number of modules	31 pcs / pallet
Number of pallet	20
No of module, 40ft HC container	620

© 2025. AERPACE INDUSTRIES LIMITED - AERVOLT



HARNESSING THE SUN, EMPOWERING THE WORLD

WHY CHOOSE AERVOLT?

Our solar panels are not only 100% recyclable, but are also more resistant to extreme weather conditions and offer very high optical reflection.



AI-Driven Efficiency

Maximizes energy production with smart technology.



Storage & Smart Grid Ready

Designed to integrate seamlessly with AI-powered battery storage & microgrids.



Hi-Performance Solar Technology

TopCon, Bifacial, and PERC modules ensure high efficiency and reliability.



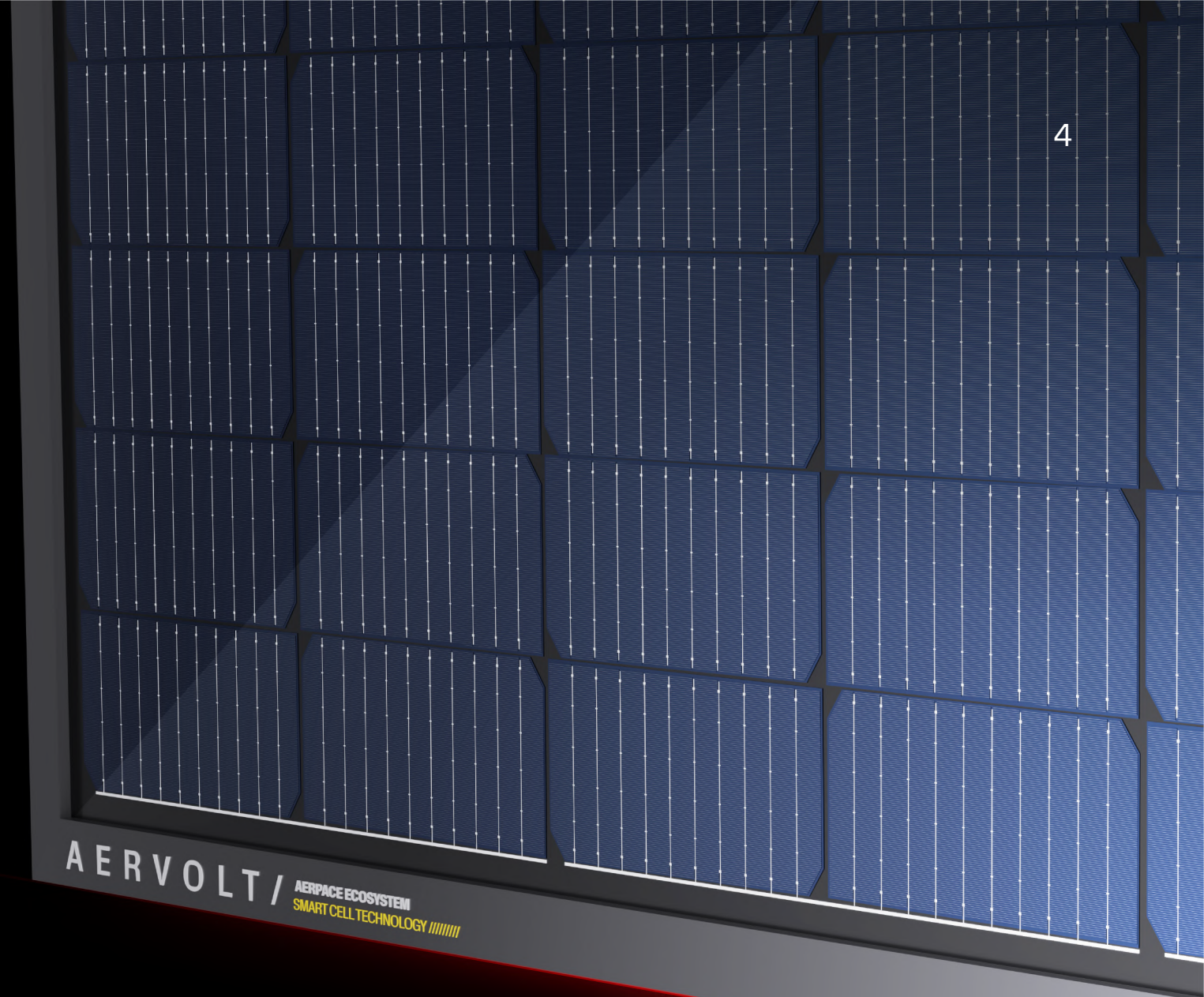
Strong Warranty & Certification

Industry-leading performance guarantee and international standards compliance.



Made in India, Global Reach

Lower costs and better availability, reducing reliance on imports.





**FOR INQUIRIES,
PARTNERSHIPS,
AND ORDERS,
CONTACT**

aerpace Industries Limited

A 1005, Kanakia Wall Street, Andheri Kurla Road, Andheri East, Mumbai, Maharashtra, India 400093
aervolt@aerpace.com | www.aerpace.com