ELDORA

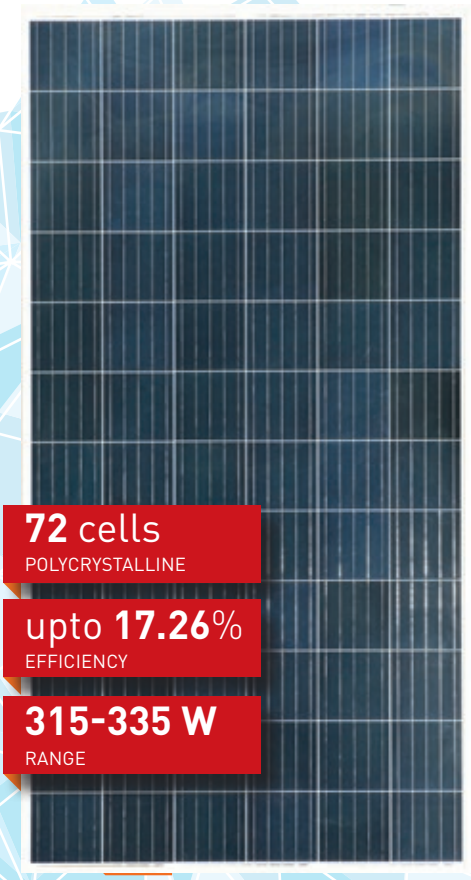
HIGH EFFICIENCY SOLAR PV MODULES

vikramsolar™

CREATING CLIMATE FOR CHANGE

ELDORA VSP.72.AAA.03.04 | POLYCRYSTALLINE SOLAR PV MODULES | 72 CELLS | 315-335 WATT

ELDORA GRAND SERIES



72 cells
POLYCRYSTALLINE

upto **17.26**%
EFFICIENCY

315-335 W
RANGE

HIGHER OUTPUT OF MODULE POWER by reducing cell to module power loss

Extremely **NARROW POWER BINNING TOLERANCE** of +2.5 Wp to reduce current mismatch loss in single string

Designed for very **HIGH AREA EFFICIENCY** ideally suited for roof-top and ground-mounted applications

Extremely **RELIABLE PRODUCT** suiting all environment conditions

Engineered to provide **EXCELLENT LOW LIGHT RESPONSE**

QUALITY AND SAFETY

- 27 years of linear power output warranty **
- Rigorous quality control meeting the highest international standards
- 100% EL tested to ensure micro crack free modules
- Certified for PID resistance
- Certified for salt mist corrosion resistance – severity VI
- Certified for ammonia resistance
- 3rd Party validated PAN file*

APPLICATIONS

- On-grid large scale utility systems
- On-grid rooftop residential, commercial and industrial roof top installations
- Off-grid residential systems
- Solar pumping applications

TECHNICAL DATA

ELDORA GRAND SERIES

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CREATING CLIMATE FOR CHANGE

THIS DATASHEET IS APPLICABLE FOR: ELDORA VSP.72.AAA.03.04 (AAA=315-335)

Electrical Data[1]

All Data refers to STC (AM 1.5, 1000 W/m², 25°C)

Peak Power P_{max} (Wp)	315.0	317.5	320.0	322.5	325.0	327.5	330.0	332.5	335.0
Maximum Voltage V_{mpp} (V)	37.5	37.6	37.7	37.7	37.8	37.9	38.0	38.1	38.1
Maximum Current I_{mpp} (A)	8.40	8.45	8.50	8.55	8.60	8.65	8.70	8.74	8.80
Open Circuit Voltage V_{oc} (V)	45.8	45.9	46.0	46.1	46.2	46.2	46.3	46.4	46.5
Short Circuit Current I_{sc} (A)	8.92	8.98	9.03	9.08	9.13	9.19	9.24	9.29	9.35
Module Efficiency η(%)	16.23	16.36	16.49	16.62	16.75	16.88	17.01	17.14	17.26

Î1) STC: 1000 W/m² irradiance, 25°C cell temperature, AM 1.5g spectrum according to EN 60904-3.
Average relative efficiency reduction of 5% at 200 W/m² according to EN 60904-1.

Electrical Parameters at NOCT[2]

Power (W)	231.2	232.8	234.6	236.5	238.3	240.1	242.0	243.8	245.6
V@P_{max} (V)	34.4	34.4	34.5	34.6	34.6	34.7	34.8	34.9	34.9
I@P_{max} (A)	6.73	6.77	6.80	6.84	6.88	6.92	6.95	6.99	7.03
V_{oc} (V)	42.5	42.5	42.6	42.6	42.7	42.7	42.7	42.8	42.8
I_{sc} (A)	7.22	7.26	7.30	7.34	7.38	7.42	7.46	7.50	7.54

2) NOCT irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec

Temperature Coefficients (Tc) permissible operating conditions

Tc of Open Circuit Voltage (β)	- 0.31%/°C
Tc of Short Circuit Current (α)	0.052%/°C
Tc of Power (γ)	-0.41%/°C
Maximum System Voltage	1000 V
NOCT	44°C ± 2°C
Temperature Range	-40°C to + 85°C

Mechanical Data

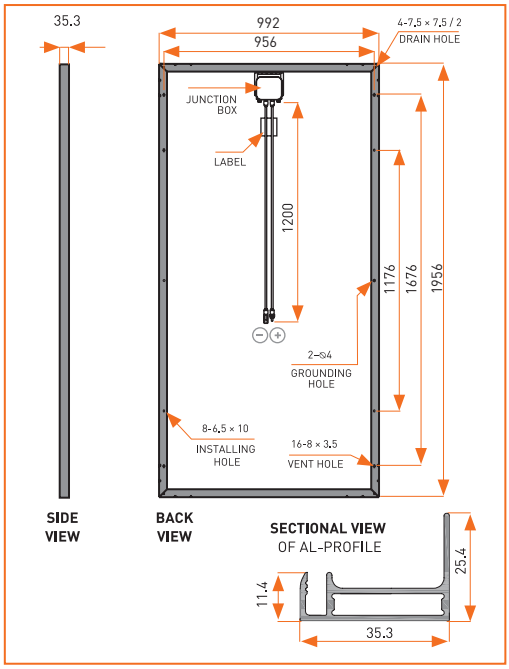
Length × Width × Height	1956 × 992 × 36 mm (77.01 × 39.06 × 1.42 inches)
Weight	22 kg (48.5 lbs)
Junction Box	IP67, 3 Bypass diodes
Cable & Connectors	1200 mm (47.24 inches) length cables, SOLARLOK PV4/MC4 Compatible/MC4 Connectors
Application Class	Class A (Safety class II)
Superstrate	3.2 mm (0.13 Inches) high transmission low iron tempered glass, AR coated
Cells	72 Polycrystalline solar cells
Cell Encapsulant	EVA (Ethylene Vinyl Acetate)
Back Sheet	Composite film
Frame	Anodized aluminium frame with twin wall profile
Mechanical Load Test	5400 Pa
Maximum Series Fuse Rating	15 A

Warranty and Certifications

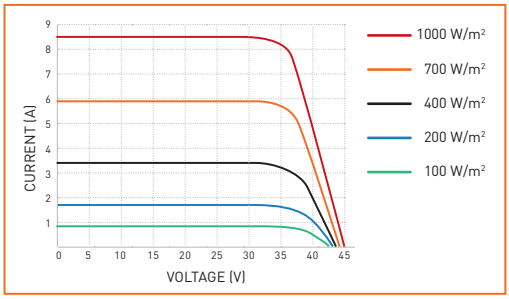
Product Warranty**	10 years
Performance Warranty**	Linear power warranty for 27 years with 2.5% for 1st year degradation and 0.67% from year 2 to year 27
Approvals and Certificates	IEC 61215 Ed2, IEC 61730, IEC 61701, IEC 62716, UL1703*, CE*, MCS*, CEC*, PV Cycle*, IEC 62804, CAN/CSA 61730*, CEC (Australia)*

* All (*) certifications under progress.
** Refer to Vikram Solar's warranty document for terms and conditions.

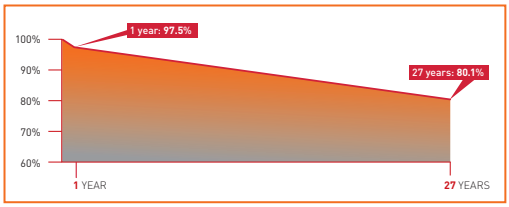
Dimensions in mm



Typical I-V Curves



Performance Warranty



Packaging Information

Quantity/Pallet	28
Pallets/Container (40'HC)	24
Quantity/Container (40'HC)	672

CAUTION: READ SAFETY AND INSTALLATION MANUAL BEFORE USING THE PRODUCT.
Specifications included in this datasheet are subject to change without notice. Electrical data without guarantee. Please confirm your exact requirement with the company representative while placing your order.

somera

HIGH EFFICIENCY MONO-Si PV MODULES

vikramsolar™

CREATING CLIMATE FOR CHANGE

SOMERA VSM.72.AAA.03.04 | MONOCRYSTALLINE SOLAR PV MODULES | 72 CELLS | 340-370 WATT

ALL NEW 72 CELLS MONO SOMERA GRAND SERIES

- **10% HIGHER POWER OUTPUT** compared to industry average poly crystalline module
- Extremely **LOW LIGHT-INDUCED DEGRADATION** on account of special passivation process
- Extremely **NARROW POWER BINNING TOLERANCE** of +2.5 Wp to reduce current mismatch loss in single string
- Engineered to provide **EXCELLENT LOW LIGHT** and **LONGER WAVELENGTH RESPONSE**
- **EXTREMELY RELIABLE PRODUCT** suiting harsh environment conditions withstanding 2400Pa Wind load, 5400Pa Snow load and Dynamic Wind load
- Using highly efficient **PASSIVATED EMITTER REAR CONTACT TECHNOLOGY** (PERC) cells

PRODUCT UNDER CERTIFICATION

QUALITY AND SAFETY

- 27 years of linear power output warranty **
- Rigorous quality control meeting the highest international standards
- 100% EL tested to ensure micro crack free modules
- Certified for PID resistance
- Certified for salt mist corrosion resistance – severity VI
- Certified for ammonia resistance
- 3rd Party validated PAN file

APPLICATIONS

- On-grid large scale utility systems
- On-grid rooftop residential and commercial systems
- Off-grid residential systems

TECHNICAL DATA

SOMERA GRAND SERIES

vikramsolar™
CREATING CLIMATE FOR CHANGE

THIS DATASHEET IS APPLICABLE FOR: SOMERA VSM.72.AAA.03.04 (AAA=340-370)

Electrical Data[1]

All data refers to STC (AM 1.5, 1000 W/m², 25°C)

Peak Power P_{max} (Wp)	340.0	342.5	345.0	347.5	350.0	352.5	355.0	357.5	360.0	362.5	365.0	367.5	370.0
Maximum Voltage V_{mpp} (V)	37.98	38.02	38.1	38.1	38.1	38.2	38.2	38.2	38.3	38.3	38.4	38.4	38.4
Maximum Current I_{mpp} (A)	8.95	9.01	9.06	9.12	9.18	9.24	9.29	9.35	9.41	9.46	9.52	9.58	9.63
Open Circuit Voltage V_{oc} (V)	47.1	47.1	47.2	47.3	47.4	47.4	47.5	47.6	47.7	47.7	47.8	47.9	48.0
Short Circuit Current I_{sc} (A)	9.42	9.49	9.56	9.63	9.70	9.76	9.83	9.90	9.97	10.04	10.10	10.17	10.24
Module Efficiency η(%)	17.52	17.65	17.78	17.91	18.04	18.17	18.30	18.42	18.55	18.68	18.81	18.94	19.07

1) STC:1000 W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at 200 W/m² according to EN 60904-1.

Electrical Parameters at NOCT[2]

Power (W)	247.9	249.7	251.5	253.3	255.2	257.0	258.8	260.6	262.4	264.3	266.1	267.9	269.7
V@P_{max} (V)	27.69	27.72	27.8	27.8	27.8	27.8	27.9	27.9	27.9	27.9	28.0	28.0	28.0
I@P_{max} (A)	8.16	8.21	8.27	8.32	8.37	8.42	8.48	8.53	8.58	8.63	8.68	8.74	8.79
V_{oc} (V)	37.66	37.72	37.8	37.9	38.0	37.9	38.0	38.1	38.2	38.2	38.3	38.3	38.4
I_{sc} (A)	8.70	8.76	8.82	8.89	8.95	9.01	9.07	9.14	9.20	9.26	9.33	9.39	9.45

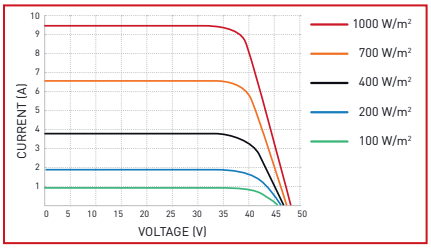
2) NOCT irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec

Temperature Coefficients (Tc)

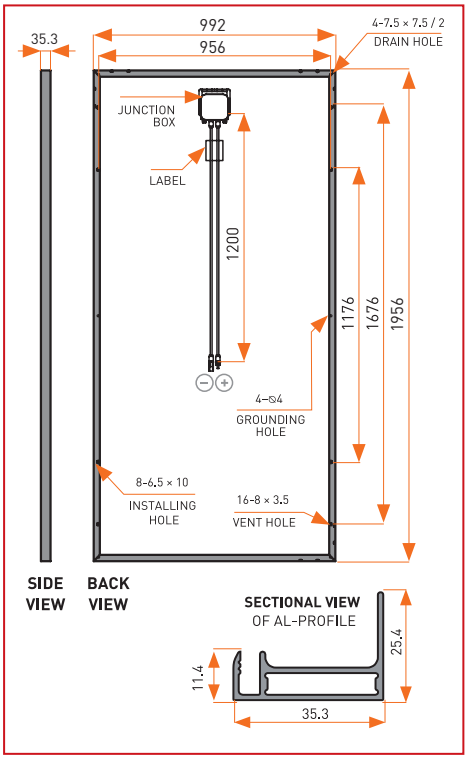
permissible operating conditions

Tc of Open Circuit Voltage (β)	- 0.28%/°C
Tc of Short Circuit Current (α)	0.057%/°C
Tc of Power (γ)	-0.39%/°C
Maximum System Voltage	1000 V
NOCT	45°C ± 2°C
Temperature Range	-40°C to + 85°C

Typical I-V Curves



Dimensions in mm



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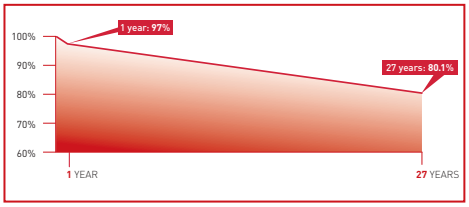
Cells	72 Monocrystalline solar cells
Cell Encapsulant	EVA (Ethylene Vinyl Acetate)
Back Sheet	Composite film
Frame	Anodized aluminium frame with twin wall profile
Mechanical Load Test	5400 Pa
Maximum Series Fuse Rating	15 A

Warranty and Certifications

Product Warranty**	10 years
Performance Warranty**	Linear Power Warranty for 27 years with 3% for 1st year degradation and 0.65% from year 2 to year 27
Approvals and Certificates	IEC 61215 Ed2*, IEC 61730*, IEC 61701, IEC 62716, IEC 60068, MCS*, CE*, CEC (Australia)*, IEC 62804*

Performance Warranty



Packaging Information

Quantity /Pallet: 28	Pallets/Container (40'HC): 24	Quantity/Container (40'HC): 672

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