somera

HIGH EFFICIENCY MONO-Si PV MODULES

vikramsolar™

CREATING CLIMATE FOR CHANGE

SOMERA VSM.72.AAA.05 | MONOCRYSTALLINE SOLAR PV MODULES | 72 CELLS | 340-370 WATT

ALL NEW 72 CELLS MONO
SOMERA GRAND
1500V SERIES

72 cells
MONOCRYSTALLINE

upto **19.07**%
EFFICIENCY

340–370 W
RANGE

- **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

Clean Energy Council MEMBER

PV CYCLE

kiwa

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 free
- Certified for salt mist corrosion resistance – severity VI
- Certified for ammonia resistance
- 3rd Party validated PAN file
- Certified for sand and dust test

APPLICATIONS

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

TECHNICAL DATA

SOMERA GRAND 1500V SERIES

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THIS DATASHEET IS APPLICABLE FOR: SOMERA VSM.72.AAA.05 (AAA=340-370)

Electrical Data[1,2]

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

Peak Power P_{max} (Wp)	340	342.5	345	347.5	350	352.5	355	357.5	360	362.5	365	367.5	370
Maximum Voltage V_{mpp} (V)	38.1	38.1	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)	8.93	8.99	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)	46.8	46.8	47.2	47.3	47.4	47.4	47.5	47.6	47.7	47.7	47.8	47.9	48
Short Circuit Current I_{sc} (A)	9.37	9.42	9.44	9.51	9.56	9.61	9.64	9.71	9.78	9.81	9.84	9.85	9.9
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. | 2) Power measurement uncertainty is within +/- 3%.

Electrical Parameters at NOCT[3]

Power (W)	251.8	253.5	256.0	257.7	259.6	262.0	263.7	265.4	267.7	269.3	272.1	274.7	276.2
V@P_{max} (V)	35.4	35.4	35.7	35.7	35.8	35.9	35.9	36.0	36.0	36.1	36.3	36.5	36.5
I@P_{max} (A)	7.12	7.16	7.18	7.22	7.26	7.31	7.34	7.38	7.43	7.47	7.51	7.53	7.57
V_{oc} (V)	43.3	43.3	43.6	43.7	43.8	43.8	43.9	44.0	44.1	44.1	44.2	44.2	44.3
I_{sc} (A)	7.58	7.62	7.64	7.69	7.73	7.77	7.80	7.86	7.91	7.94	7.96	7.97	8.01

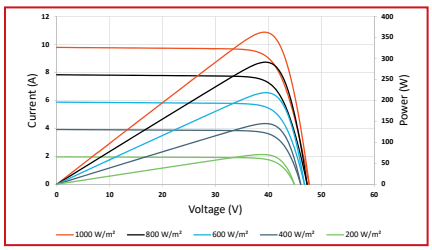
3) NOCT irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec

Temperature Coefficients (Tc)

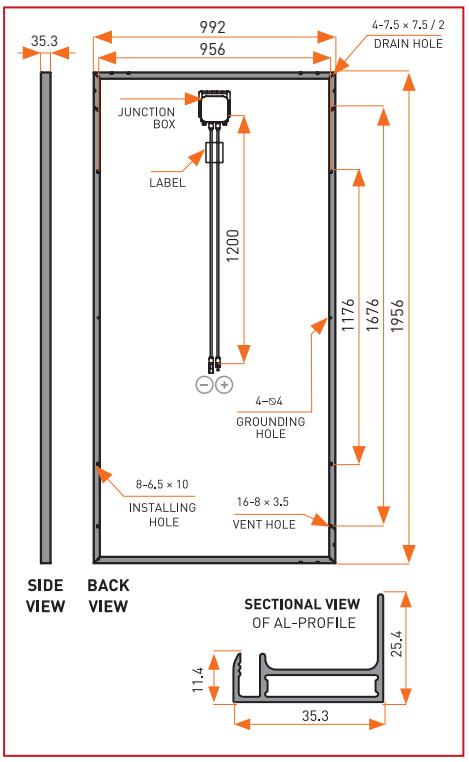
permissible operating conditions

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	1500 V
NOCT	45°C ± 2°C
Temperature Range	-40°C to + 85°C

Typical Electrical Curves



Dimensions in mm



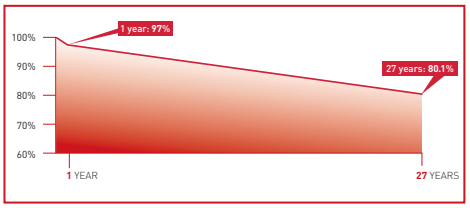
Mechanical Data

Length × Width × Height	1956 × 992 × 36 mm (77.01 × 39.06 × 1.42 inches)
Weight	20.7 kg (45.63 lbs)
Junction Box	IP68/IP67, 3 Bypass diodes
Cable & Connectors	1200 mm (47.24 inches) length cables, 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 Monocrystalline, 5BB 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 (Snow load), 2400 Pa (Wind load)
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 60068-2-68, MCS, CE, CEC (California), CEC (Australia)*, UL1703, CAN/CSA 61730

Performance Warranty



Packaging Information

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

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

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.

sales@vikramsolar.com www.vikramsolar.com