

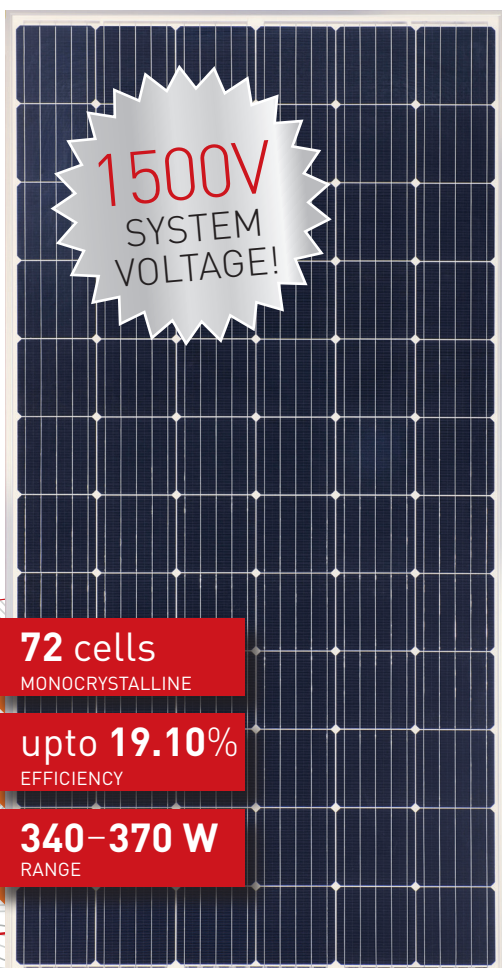
# somera

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 ULTIMA SILVER 1500V SERIES



### 10% HIGHER POWER OUTPUT

compared to industry average poly crystalline module



### 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

suited harsh environment conditions withstanding 2400Pa Wind load, 5400Pa Snow load



Using highly efficient **PASSIVATED EMITTER REAR CONTACT TECHNOLOGY** (PERC) cells



### QUALITY AND SAFETY

- ◆ 27 years of linear power output warranty \*\*
- ◆ Rigorous quality control meeting the highest international standards
- ◆ 100% EL tested to minimise micro crack
- ◆ Excellent anti-PID performance

- ◆ 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 ULTIMA SILVER 1500V SERIES



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

### Electrical Data<sup>1,2</sup> All data refers to STC

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 $\eta$ (%)	17.55	17.68	17.81	17.94	18.07	18.19	18.32	18.45	18.58	18.71	18.84	18.97	19.10

1) STC: 1000 W/m<sup>2</sup> irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. 2) Power measurement uncertainty is within +/- 3%.

### Electrical Parameters at NOCT<sup>3</sup>

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/m<sup>2</sup>, ambient temperature 20°C, wind speed 1 m/sec.

### Temperature Coefficients (Tc) permissible operating conditions

Tc of Open Circuit Voltage ( $\beta$ )	-0.28%/°C
Tc of Short Circuit Current ( $\alpha$ )	0.057%/°C
Tc of Power ( $\gamma$ )	-0.39%/°C
Maximum System Voltage	1500 V
NOCT	45°C ± 2°C
Temperature Range	-40°C to + 85°C

### Mechanical Data

Length × Width × Height	1955 × 991 × 40 mm (76.96 × 39.01 × 1.57 inches)
Weight	22 kg (48.50 lbs)
Junction Box	IP68/IP67, 3 Bypass diodes
Cable & Connectors	1200 mm (47.24 inches) length cables, MC4 Compatible/MC4 Connectors/Amphenol
Application Class	Class A (Safety class II)
Superstrate <sup>#</sup>	3.2 mm <sup>#</sup> (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	20 A

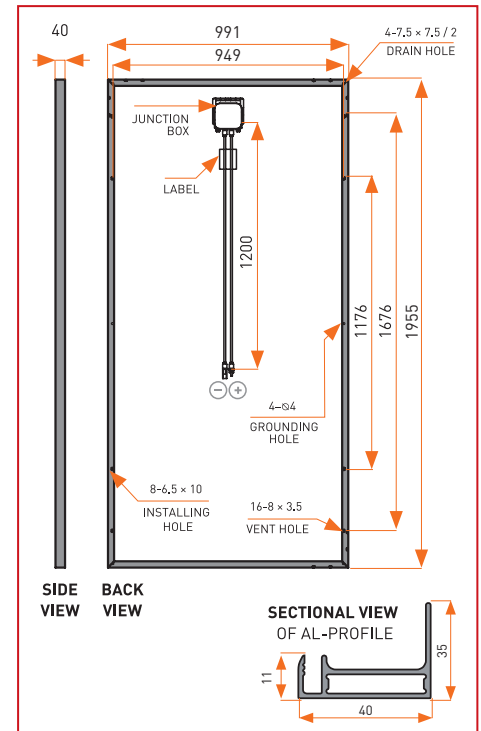
<sup>#</sup> Also available in anti-soil. | <sup>#</sup> Available from April, 2019.

### Warranty and Certifications

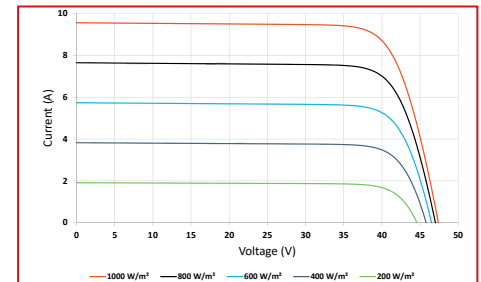
Product Warranty**	10 years
Performance Warranty**	Linear Power Warranty for 27 years with 3% for 1st year degradation and 0.65% from year 2 to year 27
Approvals and Certificates	IEC 61215 Ed2, IS/IEC 61730, UL 1703, IEC 61701, IEC 62716, IEC 60068-2-68, IEC 62804, MCS, CE, CAN/CSA 61730, CEC(California), PV Cycle <sup>+</sup> , CEC (Australia) <sup>+</sup> , IS 14286

<sup>+</sup> All (\*) certifications under progress. | \*\* Refer to Vikram Solar's warranty document for terms and conditions.

### Dimensions in mm

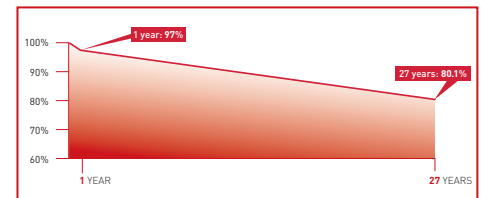


### Typical I-V Curves<sup>4</sup>



4) Average relative efficiency reduction of 5% at 200 W/m<sup>2</sup> according to EN 60904-1.

### Performance Warranty



### Packaging Information

Quantity/Pallet	25
Pallets/Container (40'HC)	24
Quantity/Container (40'HC)	600

**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.

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