somera

HIGH EFFICIENCY MONO-Si PV MODULES

vikramsolar

CREATING CLIMATE FOR CHANGE

SOMERA VSM.72.AAA.03.04 | MONOCRYSTALLINE SOLAR PV MODULES | 72 CELLS | 360-385 WATT

SOMERA GRAND ULTIMA

72 Mono PERC Solar Cells

up to **19.87**% Efficiency

360-385 W Range

10% HIGHER POWER OUTPUT compared to industry average poly crystalline module

Engineered to provide **EXCELLENT LOW LIGHT** and **LONGER WAVELENGTH RESPONSE**

EXTREMELY RELIABLE PRODUCT suiting harsh environment conditions withstanding 2400Pa Wind load, 5400Pa Snow load

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

TÜVRheinland CERTIFIED

IEC 61215
IEC 61730
Regular Production Surveillance

www.tuv.com
ID 1111219270

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
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APPLICATIONS

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

TECHNICAL DATA

SOMERA GRAND ULTIMA

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THIS DATASHEET IS APPLICABLE FOR: SOMERA VSM.72.AAA.03.04 (AAA=360-385)

Electrical Data[1,2] All data refers to STC

Peak Power P_{max} (Wp) Power Tolerance : 0 ~ +4.99Wp	360	365	370	375	380	385
Maximum Voltage V_{mpp} (V)	39.7	39.8	40.0	40.1	40.3	40.4
Maximum Current I_{mpp} (A)	9.10	9.17	9.26	9.36	9.44	9.53
Open Circuit Voltage V_{oc} (V)	48.2	48.3	48.3	48.5	48.7	48.9
Short Circuit Current I_{sc} (A)	9.65	9.73	9.84	9.94	9.94	9.96
Module Efficiency η(%)	18.58	18.84	19.10	19.36	19.61	19.87

1) STC:1000 W/m² irradiance, 25°C cell temperature, AM 1.5G spectrum according to EN 60904-3. | 2) Measurement Tolerance at STC: P_{max} : ± 3%Voc : ± 5%Isc : ± 5%.

Electrical Parameters at NOCT[3]

Power (W)	266.5	270.2	273.9	277.6	281.3	285.0
V@P_{max} (V)	36.6	36.8	36.9	37.1	37.2	37.3
I@P_{max} (A)	7.28	7.34	7.41	7.49	7.56	7.63
V_{oc} (V)	44.5	44.7	44.7	44.9	45.0	45.2
I_{sc} (A)	7.81	7.87	7.96	8.04	8.04	8.06

3) NOCT Irradiance 800 W/m², ambient temperatire 20 Deg Cent, AM 1.5G Spectrum, Wind Speed 1m/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

Electrical data in this catalog do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.

Mechanical Data

Length × Width × Height	1955 ± 2mm × 991 ± 2mm × 40 ± 1mm
Weight	22 kg +/- 3%
Junction Box	IP68/IP67, 3 Bypass diodes
Cable Cross Section Size	4mm²
Connectors	PVKST4-EV02/xy_UR/PVKBT4-EV0 2/xy_UR , PV-JM608 , 05-8.
Application Class	Class A (Safety class II)
Superstrate	3.2 mm (0.13 inches) high transmission low iron tempered glass, AR coated
Cells	72 (6 × 12) Monocrystalline, 5BB solar cells
Cell Encapsulant	EVA (Ethylene Vinyl Acetate)
Back Sheet	Composite film
Frame	Anodized aluminium frame with twin wall profile
Maximum Static Load, Front	3600Pa, 1.5
Maximum Static Load, Back	1600Pa, 1.5
Maximum Series Fuse Rating	20 A (IEC)

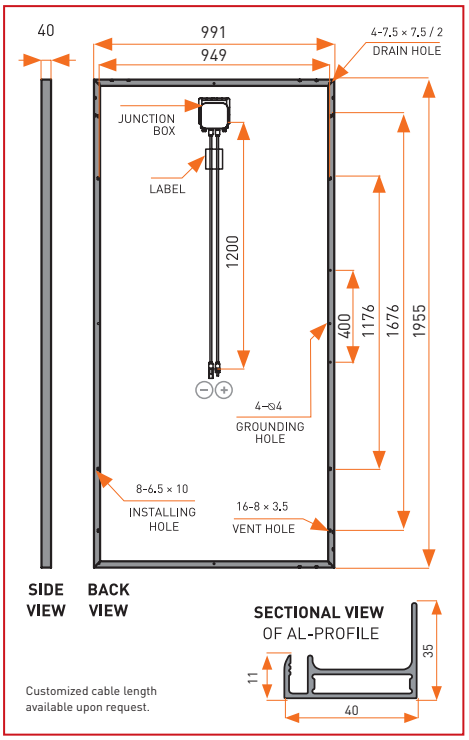
Also available in anti-soil and anti-glare

Warranty and Certifications

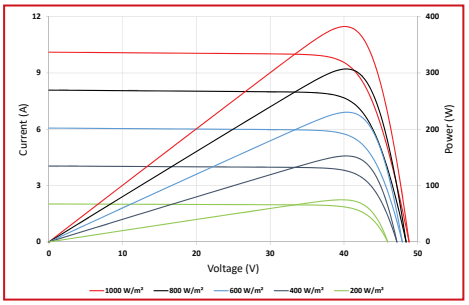
Product Warranty**	10 years
Performance Warranty**	Linear Power Warranty for 27 years with 3% for 1st year degradation and 0.65% from year 2 to year 27
Approvals and Certificates	IEC 61215 : 2016, IEC 61730: 2016, IS 14286

** Refer to Vikram Solar's warranty document for terms and conditions

Dimensions in mm

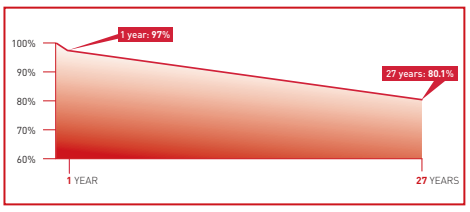


Typical I-V Curves[4]



4) Average relative efficiency reduction of 5% at 200 W/m² 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. Please confirm your exact requirement with the company representative while placing your order.

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