SOMERA GRAND ULTIMA MAX SILVER

SUPERIOR PRICE PERFORMANCE
of half-cell improves module output without adding much to the cost

Half-cell generates only half the current, lowering heat production and LESS HOT SPOT, increasing module reliability

Low interconnect resistance between the cells REDUCES POWER LOSS, increases overall power output

Three separate junction boxes reduce internal resistance and IMPROVE HEAT DISSIPATION

QUALITY AND SAFETY
• 27 years of linear power output warranty **
• Rigorous quality control meeting the highest standards
• 100% EL tested to minimise micro crack
• Certified for salt mist corrosion resistance – severity VI^*
• Excellent anti-PID performance

APPLICATIONS
• On-grid large scale utility systems
• On-grid rooftop industrial and commercial systems
• Rooftop residential systems

SOMERA VSMH.75.AAA.05 | MONOCRYSTALLINE SOLAR PV MODULES | 150 CELLS | 405-425 WATT

Preliminary datasheet Product Available from January 2020
TECHNICAL DATA
SOMERA GRAND ULTIMA MAX SILVER

THIS DATASHEET IS APPLICABLE FOR: SOMERA VSMH.75.AAA.05 (AAA=405-425)

Electrical Data

Peak Power $P_{\text{max}}$ (Wp) | 405 | 410 | 415 | 420 | 425
Maximum Voltage $V_{\text{mpp}}$ (V) | 42.4 | 42.4 | 42.6 | 42.7 | 42.7
Maximum Current $I_{\text{mpp}}$ (A) | 9.56 | 9.67 | 9.74 | 9.84 | 9.96
Open Circuit Voltage $V_{\text{oc}}$ (V) | 51.6 | 52.1 | 52.6 | 52.7 | 52.8
Short Circuit Current $I_{\text{sc}}$ (A) | 9.94 | 9.96 | 9.97 | 9.99 | 10.17
Module Efficiency $\eta$ (%) | 19.59 | 19.83 | 20.08 | 20.32 | 20.56

Dimensions in mm

Electrical Parameters at NOCT

Power (W) | 284.5 | 288.0 | 291.5 | 295.0 | 298.5
$V_{\text{mpp}}$ (V) | 37.8 | 37.9 | 38.1 | 38.1 | 38.1
$I_{\text{mpp}}$ (A) | 7.52 | 7.60 | 7.66 | 7.74 | 7.83
$V_{\text{oc}}$ (V) | 46.3 | 46.8 | 47.2 | 47.4 | 47.4
$I_{\text{sc}}$ (A) | 7.78 | 7.80 | 7.81 | 7.82 | 7.97

Temperature Coefficients (Tc)

$\text{Tc of Open Circuit Voltage (}\beta\text{)}$ | -0.28%/$\degree\text{C}$
$\text{Tc of Short Circuit Current (}\alpha\text{)}$ | 0.057%/$\degree\text{C}$
$\text{Tc of Power (}\gamma\text{)}$ | -0.39%/$\degree\text{C}$

Maximum System Voltage | 1500 V
NOCT | 45°C ± 2°C
Temperature Range | -40°C to + 85°C

Mechanical Data

Length x Width x Height | 2065 x 1001 x 40 mm (81.29 x 39.40 x 1.57 inches)
Weight | 22.4 kg (49.82 lbs)
Junction Box | IP68/IP67, Split Junction Box with individual 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 | 75 Mono PERC (150 half-cells), 5BB solar cells
Cell Encapsulant | EVA (Ethylene Vinyl Acetate)
Back Sheet | Composite film
Frame | Anodized aluminium frame with twin wall profile
Mechanical Load Test | 2400 Pa (Snow load), 2400 Pa (Wind load)
Maximum Series Fuse Rating | 20 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

Packaging Information

Quantity / Pallet: 26
Pallets/Container (40’HC): 22
Quantity/Container (40’HC): 572

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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1 STC:1000 W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3.
2 Power measurement uncertainty is within ±3%.
3 NOCT: irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec
4 Average relative efficiency reduction of 5% at 200 W/m² according to EN 60904-1.

* All 14 certifications under progress.
** Refer to Vikram Solar’s warranty document for terms and conditions.