

# SOLIVO SMART GRAND



**up to 19.84%**  
EFFICIENCY

**365-385 W**  
RANGE

**72** MONO PERC  
SOLAR CELLS

- Up to 30%# more energy yield using TS4-0 cover
- Increased safety and remote monitoring through smart app-based monitoring-rapid shutdown option
- Smart ready junction box for highest flexibility of options at any point of time
- Aesthetic smart design perfectly suitable for rooftop applications

INTERCHANGEABLE COVERS FOR CHOICE OF FUNCTION



INTEGRATED WITH TIGO'S TS4 PLATFORM



### QUALITY AND SAFETY

- ◆ 25 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
- ◆ Certified for sand and dust test

### APPLICATIONS

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

# TECHNICAL DATA

## SOLIVO SMART GRAND

THIS DATASHEET IS APPLICABLE FOR: SOLIVO SMART GRAND REGISTERED AS SOMERA VSMS.72.AAA.03.04 (AAA=365-385)

### Electrical Data<sup>1,2</sup> All data refers to STC (AM 1.5, 1000 W/m<sup>2</sup>, 25°C)

Peak Power P <sub>max</sub> (Wp)	365	370	375	380	385
Maximum Voltage V <sub>mpp</sub> (V)	39.8	40.0	40.1	40.2	40.3
Maximum Current I <sub>mpp</sub> (A)	9.17	9.26	9.36	9.46	9.56
Open Circuit Voltage V <sub>oc</sub> (V)	48.3	48.5	48.7	48.8	48.9
Short Circuit Current I <sub>sc</sub> (A)	9.73	9.84	9.94	10.04	10.14
Module Efficiency η (%)	18.81	19.07	19.33	19.58	19.84
Maximum Voltage V <sub>max</sub> TS4-L (V)	43	43.4	43.5	43.5	43.5
Maximum Current I <sub>max</sub> TS4 (A)	12	12	12	12	12

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)	270.2	273.9	277.6	281.2	284.9
V@P <sub>max</sub> (V)	36.8	36.9	37.1	37.0	37.1
I@P <sub>max</sub> (A)	7.34	7.41	7.49	7.57	7.65
V <sub>oc</sub> (V)	44.7	44.9	45.0	44.9	45.0
I <sub>sc</sub> (A)	7.87	7.96	8.04	8.03	8.11
V <sub>max</sub> TS4-L (V)	43	43.4	43.5	43.5	43.5

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 (β)	- 0.28%/°C
Tc of Open Circuit Voltage TS4-L (β <sub>V<sub>oc</sub></sub> )	0.0%/°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

### Mechanical Data

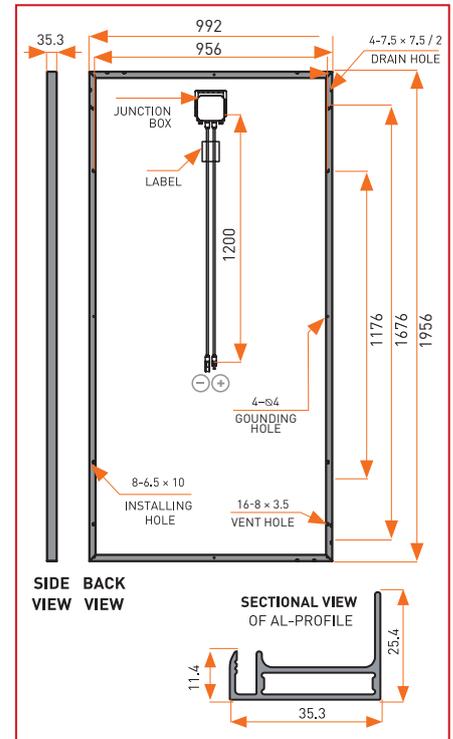
Length × Width × Height	1956 × 992 × 36 mm (77.01 × 39.06 × 1.42 inches)
Weight	20.7 kg (45.63 lbs)
Junction Box	IP67, TS4-base with smart ready covers. (TS4-D; TS4-M; TS4-F; TS4-S; TS4-O; TS4-L)
Cable & Connectors	1200 mm (47.24 inches) length cables, MC4 Compatible/MC4 Connectors
Application Class	Class A (Safety class II)
Superstrate	3.2 mm (0.13 inches) high transmission low iron tempered glass, AR coated
Cells	72 Mono PERC, 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	15A (IEC) / 20A (UL)

### Warranty and Certifications

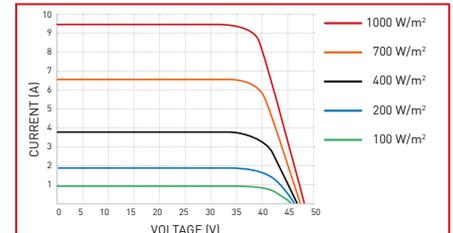
Product Warranty**	10 years
Performance Warranty**	Linear Power Warranty for 25 years with 3% for 1st year degradation and 0.65% from year 2 to year 25
Approvals and Certificates	IEC 61215 Ed2, IEC 61730, IEC 61701*, IEC 60068-2-68*, MCS, CE, CEC (California), UL 1703, IS 14286, IEC/IS 61730

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### Dimensions in mm

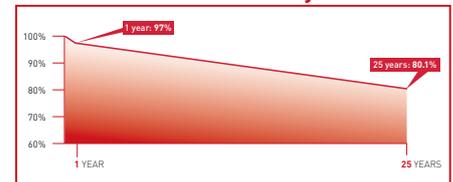


### Typical I-V Curves<sup>4</sup>



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	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.